



S. 146.A.1.

The Leeds Philosophical & Literary Society.

Oct. 1, 1883.

Gentlemen,

I enclose the 5th
Report of this Socy. Nos 1 to 4
are out of print. No charge
will be made for the above

Yours faithfully

(pro) W. F. Husband
G.R.B.

Secy.

Messrs. Dulau & Co
London.

1870

General

My dear Sir,
I have the honor to acknowledge
the receipt of your letter of the 10th
inst. and in reply to inform you
that the same has been forwarded
to the proper authorities for their
consideration.

Yours faithfully,
[Signature]

S. 146. A. 1.

A. 21.2

S. 146. A 160

FIFTH REPORT

OF THE

COUNCIL,

ON THE GENERAL STATE OF THE

LEEDS

PHILOSOPHICAL AND LITERARY

SOCIETY,

1824—5.

LEEDS:
PRINTED BY EDWARD BAINES.

1825.

FIFTH REPORT

OF THE GENERAL STATE OF THE

PHILOSOPHICAL AND LITERARY

SOCIETY.

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FIFTH REPORT

OF THE

Leeds Philosophical and Literary Society,

1825.

A RECURRENCE of the period appointed by the laws of your society for its anniversary meeting, calls upon your Council to fulfil their customary duty of reviewing the proceedings of the past session.

In a document of this nature, however, it becomes every year more difficult to supply that variety of detail, without which an official communication becomes merely a tiresome form, devoid of interest or effect. The operations of a Literary Society, after its first establishment, are for the most part so uniform, the transactions of one session being almost a repetition of those which have preceded it, that little opportunity exists for any thing but a narration of ordinary matters of fact.

It will, however, be the aim of your Council, in the following report, to select such subjects, as appear to them more peculiarly connected with the welfare of the Society, and on that account more especially worthy of your attentive consideration.

In the first place, it is highly gratifying to perceive a considerable accession to the number of its members, both proprietary and ordinary, six of the one, and twenty-two of the other, having been elected in the course of the present session; being a greater addition of members, of the latter denomination, than has occurred during any preceding similar

period since its establishment. And it is with pleasure that your Council recognize amongst the number, many whose habits and pursuits qualify them, in a peculiar manner, to render the most efficient services to your society, and who have already given decisive pledges of their future zealous co-operation.

It will be seen, by the annexed statement from your Treasurer, that, in consequence of the creation of six proprietary members since the last report, a considerable sum, amounting, with the deposits of £200 at that time in his hands, to £800, is owing to the Building Fund. It is with regret, however, that they allude to the inadequacy of your annual income to the current expenditure of the society, a subject on which it has been the misfortune of almost every preceding Council to offer a similar lamentation. Persuaded, after a careful review of their proceedings, in the disposal of its funds, that every attention compatible with a just appreciation of its interests, has been given to economy, they feel no reluctance in referring so pointedly to the subject of finance. The experience of every year forces them to the conclusion, that your present income is insufficient to meet the varied requirements of an institution embracing so many important objects, each of which possesses claims upon your regard. Your Council would, therefore, submit to your consideration the expediency of adopting, at a future occasion, some propositions similar to those which were discussed at the last general meeting of the preceding session, respecting the increase of the subscription of ordinary members. The sacrifice required by each member would be inconsiderable, and would be certainly compensated by the increase of his advantages, and by the satisfaction of perceiving a higher degree of vigour and respectability imparted to the society's operations.

It would have been very gratifying to your Council, if they could have announced to you on the present occasion the immediate prospect of realizing the hopes expressed in a

former report, respecting the erection of a New Museum. They trust, however, that you have made considerable advances towards the consummation of that desirable object. It appears that a very decided conviction exists in the minds of the members at large, that the present Museum is neither sufficiently commodious, nor in any respect eligible, for the purposes of an increasing and valuable collection of subjects of natural history and art. The subject had frequently occupied the attention of the Council, and, it being suggested, in the progress of discussion, that other parts of the Hall were not sufficiently adapted to their respective uses, it occurred to some individuals, that the most effectual way of accomplishing their wishes would be to dispose of the present building and the adjoining land, and out of the funds thus obtained, and the deposits of additional proprietary members who might be expected to offer, to raise a building in all respects more complete, and more in correspondence with the growing importance of the institution. The proposition was thought of so much importance as to justify the propriety of ascertaining the sentiments of the proprietary members, at a special general meeting—which was accordingly convened for that purpose. The subject having been stated and discussed, it was deemed expedient to defer any specific resolution until the Council had proceeded further in their investigation, and collected additional information.

The first part of the inquiry naturally related to the disadvantages of the present Hall, and to the question how far these could be obviated without abandoning the original site. In compliance with the determination of that meeting, your Council avail themselves of the present opportunity of stating to you the result of their deliberations and inquiries on this very important subject.

It may appear strange to some, that the imperfections of the Society's Hall should not have been discovered until the present time. It should, however, be known, that they have been sensibly felt ever since the institution commenced

its active operations, though no suitable opportunity has arisen for bringing them before the attention of the Society. Nor should it be considered a circumstance reflecting any discredit on the original promoters, that the building is found so inadequate to its increasing requirements. It will be recollected that the establishment of a Museum was scarcely contemplated, or at least not avowed, by those public-spirited individuals; and, that the prosperity of the general objects of the Society has so far out-grown their most sanguine anticipations, that the building, at first thought unnecessarily spacious, is now found small and incommodious. Your attention is invited to a few of its most obvious imperfections.

The Lecture-room, both in its construction and situation, is liable to several objections. It affords accommodations scarcely sufficient to admit the whole of its members, and the visitors introduced by the additional tickets of proprietors. In many instances that have occurred, when the public and the members of the Society have been attracted to the Hall by Lectures of great popularity, the lecture-room has been found quite inadequate. It is totally unfit for many experiments in natural philosophy requiring the presence of a strong solar light. Its vicinity to the street, which is daily becoming more frequented, by the formation of new communications with other parts of the town, and by the growing commercial character of the neighbourhood, is productive of much disturbance.

The Museum, which was formed without any reference to its present object, is consequently quite unsuitable as a depository of subjects of Natural History, requiring scientific arrangement, and the indispensable advantages of a regulated temperature, and a vertical light. It has been for some time acknowledged, that much inconvenience has arisen from the want of private rooms for the officers of the Society, for the transaction of its increasing and multifarious business. In addition to these several desiderata, it may not be improper

to mention, that the want of a suitable entrance to the valuable cellars underneath the Hall, deprives the institution of a considerable addition to its annual income.

Impressed with these considerations, your Council would earnestly reiterate the recommendation of their predecessors, that you should avail yourselves of the efficient means within your power, both individually and collectively, to raise the necessary funds, by which every alleged imperfection may be supplied, and every inconvenience removed.

They have, however, come to the conclusion, that these valuable ends may be attained, without abandoning the present Hall, and selecting another site; and finding, also, that a very strong objection exists in the minds of a large proportion of the members to any change of situation, they respectfully propose that some measures be taken, by which the vacant land at the west side of the Hall may be occupied with such an additional erection, as may be formed with the least possible disturbance to the internal plan of the present edifice, and in perfect correspondence with its external architecture.

By this step, the Society would have a lecture-room, spacious and commodious, and adapted to the purposes of philosophical experiment and illustration, either with solar or artificial light; and a Museum, worthy of the advancing prosperity of the collection, and of the patronage of its friends, of whose munificence the least acknowledgment you can make, is to provide their contributions with an apartment, where they may be *advantageously* seen, and *securely* preserved.

Your Council have too confident a reliance on that enlightened public spirit, which has left itself so many honourable memorials in the history of your Society, to feel any anxiety as to the full and speedy accomplishment of their wishes.

Reverting to the usual order of Report, your Council are happy to observe a very respectable augmentation in the

Museum, in the course of the last year. At the head of the list of donations received since the last Annual Meeting, stands the splendid gift, presented by John Blayds, Esq. of the Mummy of an Egyptian Priest, in high preservation, and in every respect an excellent specimen of that wonderful art, which, though itself extinct, has conferred a species of immortality on the only perishable part of human nature.

The limits of your Report preclude a particular detail of many other valuable presents already inserted in the catalogue of donations, which respectively claim your grateful acknowledgments. Reviewing the sources from which your Museum has received its principal support, you will perceive that it has been formed chiefly by the liberality of its own members and their connections, and of occasional visitors. With some few exceptions, it has derived little assistance from the patronage of rank or power, by whose fostering influence many similar institutions have been nurtured into splendour and importance. You are referred to this circumstance as a fact highly honourable to the promoters of the Society, and a powerful incentive to the continued exertions of those who feel a local interest in its prosperity. Your collection has been formed almost entirely by gratuitous contributions. An opportunity, however, occurred some months ago, by which a small grant out of the Society's funds enabled the Curator to enrich it by a valuable addition of 340 subjects, consisting of 100 Fishes, 60 Crustaceæ, 50 Molluscæ, collected chiefly on the shores of the Mediterranean. By this accession, several important connecting links in your collection have been supplied.

A considerable expense has been incurred in providing additional cases necessary to the purposes of that improved classification which it has been attempted to introduce, and which, imperfect as it must be confessed to be, is almost as complete as is attainable in the present apartment.

In reference to the scientific and literary proceedings of the Session elapsed, your Council confidently hope they will

bear a comparison with those of any former period. The following enumeration of papers read, amply attests that its resources are undiminished, and that the zeal of its members has suffered no abatement. It is also proper to notice, that your Meetings have derived less assistance from foreign quarters than usual, in consequence of the very acceptable services of members, who had not previously contributed.

The papers read in the course of the Session have been delivered in the following order :—

1. "A Retrospect of Philosophical Institutions, and some considerations on their utility," by Jas. Williamson, M.D. read November 5th.
2. "On the Bed of the Mississippi," by John Luccock, read Friday, November 19th.
3. "On the Philosophy of Names," by Rev. R. Humphreys, read Dec. 3d.
4. "On Coal Plants, and the Origin of Coal," by J. Philips, read Dec. 17th.
5. "On the Physiology of Plants," by T. P. Teale, read January 7th.
6. "On the Question how far Poetical Views are compatible with strict Justice," by J. Yorke, read January 21st.
7. "On the Revival of Literature in Italy in the 14th century," by Jas. Entwistle, read February 4th.
8. "On Mental Originality," by Wm. West, read February 18th.
9. "On Personal Identity," by the Rev. R. W. Hamilton, read March 4th.
10. "On Painting and Painters, from the time of the accession of Henry VIII. to the death of Charles I." by Francis Thomas Billam, read March 18th.
11. "On the Principle of Population, considered in connection with the Poor Laws," by M. T. Sadler, read April 8th.
12. The Twelfth Meeting was occupied by conversation on some Literary and Scientific subjects.
13. "On the best means of improving the Condition of the Poor in large Towns," by M. T. Sadler, read May 6th.
14. "On the object of Capt. Franklin's present expedition to the North Pole," by M. Traill, M.D. F.R.S. E. &c. Liverpool.

The Session now expired has been unusually prolific of public lectures on a great variety of subjects, which have followed each other in such rapid succession, that no period of considerable length has been unoccupied. From peculiar circumstances, your Council were induced to provide a larger number than you have been accustomed to enjoy during a similar period. Could they have anticipated the

amount of assistance they have derived from their own members, they certainly would have been disposed to have deferred availing themselves of the services of distant individuals. There is, however, some satisfaction in reflecting that, by the variety introduced into the literary and scientific business of the Session, the tastes and pursuits of a large number of members have been accommodated, and that little additional expense has been incurred by the arrangement.

In the months of November and December, a course of twelve lectures on the principles of Chemistry, Electricity, and Electro-Magnetism, was delivered by Messrs. West and George. In the months of January and February, six lectures on the Hieroglyphical Antiquities of Egypt were delivered by Messrs. John Atkinson and Wm. Osburn, junrs. whose attention had been first directed to that subject by an examination of the valuable Mummies presented to your Society. By the industry of these gentlemen, the modern discoveries of Champollion and Young were applied, apparently with considerable success, to the interpretation of the inscriptions covering the cases of those remarkable relics.

A course of lectures on the curious doctrines of Phrenology having been offered by Dr. Allen, and very urgently solicited by several members, your Council conceived they should act in conformity with the liberal views of the Society, by affording to those who felt interested in the inquiry, an opportunity of investigating that much agitated subject. Dr. Allen's lectures were accordingly delivered in March, and proved very attractive.

In the months of April and May, Mr. M. T. Sadler delivered a course of public lectures on the Poor Laws of England, constituting a defence of their principle in opposition to the views of some modern political economists. It was at first announced that Mr. Sadler's course would be comprised in three lectures, but, the subject expanding in the course of investigation, he was induced to extend it to eight, including two which were given in the form of papers at General Meetings.

Your Council are precluded, by obvious considerations, giving any expression of their opinion, or of the sentiments of the Society at large, in reference to the ability displayed by the lectures of its own members. They may be allowed, however, to indulge the confident hope, that they have produced an impression on the public mind in every respect favourable to the growing reputation of the institution.

In the course of the present month, (May,) seven lectures on the Arts of Design have been delivered to your Society, by Mr. E. V. Rippingille, of Bristol, a gentleman who has attained considerable eminence by his graphic productions. Though a subject not strictly included in the objects of your institution, it was conceived that a series of lectures on Painting, an art, which forms at once the surest test of the progress of civilization in past ages, and the best illustration of modern refinement, was on every account suitable to a Society, which should account nothing foreign from its design connected with the amelioration of taste, or the progress of intellect. They rejoice, however, that the brilliant success of another institution, formed especially for the promotion of the Fine Arts, leaves them nothing to hope for in these respects, but to express their ardent wishes that the Northern Society, whose establishment forms one of the brightest eras in the intellectual history of Leeds, may long pursue its useful and honourable career, and prove a source of the most refined pleasure, as it is a monument of the most enlightened taste.

In consequence of a Resolution, unanimously carried at a special General Meeting, in the course of the preceding Session, convened in compliance with the solicitation of the friends of the Mechanics' Institute, at that time not fully matured and organized, the Hall of your Society has been in weekly requisition by the lecturers of that excellent establishment, whose unanticipated measure of success must afford genuine satisfaction to every member of your institution. You will reflect with pleasure that you have had an oppor-

tunity of contributing so materially to its prosperity ; and, as the friends of the best interests of the community, you will be anxious to promote, by every means in your power, the efficacy of this admirable expedient for ameliorating the character and condition of our countrymen,—which, in its local operation, promises the most beneficial results, to the immediate objects of it, by raising them to a higher sphere of intellectual illumination, and by a necessary consequence of social happiness and moral respectability, and to our Society by a salutary reaction, awakening those more favoured by fortune to improve the scientific advantages which it holds out, that they may rise in corresponding advances with the progressive ascent of the public mind, and thus retain the same high position in relation to knowledge, which, by the allotments of Providence, they occupy in reference to the external circumstances of society.

The Meteorological Observations have been continued, under the regular and accurate management of their former registrar. The results being regularly recorded and published every month in the local journals, are accessible not only to the Society, but to the public. They have already suggested some questions of curious and useful speculation ; and, if continued some years, especially in conjunction with similar contemporaneous observations in other places, may furnish a solution of several important meteorological problems.

In reference to the Library, your Council have it not in their power to adopt the language of congratulation. That important feature of your institution still languishes for want of adequate funds. It is, however, hoped, that if the projected additional erection be effected, with the proposed alteration in the interior arrangement of the building, by which the Library may be placed on the ground floor, and opened in the evenings, it will assume a greater prominence as a part of your establishment, and invite more extensive support than it has hitherto received.

Upon the whole, it is conceived that this general retrospect of the society's proceedings in the course of the last session, furnishes many subjects of encouragement, and some of congratulation.

In the variety and extent of literary and scientific communications, it has surpassed every preceding session. These also have arisen with a regularity and spontaneousness which have greatly abridged the labours of your Council, and afforded abundant materials to excite the ardour and stimulate the research of your members. They feel assured that your society has gathered strength and respectability, and that it continues to realize a large share of those important benefits, for the production of which it was instituted. The number of its friends is undiminished, and it is gradually conciliating the esteem of those who at first doubted its expediency, or underrated its resources. If it has been deserted by some of its earliest and most sanguine supporters, it is consolatory to reflect that others have stepped forward to its assistance, not less zealous and efficient. If some, on whom it calculated for aid, have forgotten the pledges given in the fervour of their early attachment, others from whom the society had, at least, nothing to hope, have generously united themselves to its interests, and confessed, by their active co-operation, that their fears were unfounded, and that their scepticism has disappeared. The experience of the society fully attests that its prosperity is not dependant on the services of those who may accidentally occupy the executive management of its affairs, however essential they may appear, and that it is too firmly established in the best wishes of its members, to be materially affected by occasional desertions.

Your Council, however, would abstain from the language of unqualified praise, or unmeasured triumph, which would be equally inconsistent with their real sentiments, and inappropriate to the present occasion. They perceive many circumstances in your institution which call for improvement,

and a great disparity between its actual achievements, and their ardent wishes and expectations. They are satisfied that it possesses within itself capabilities of a higher degree of prosperity than has ever yet been contemplated ; that, in extent of information, diversity of talent, facilities of observation, and incitements to inquiry, few societies, of the same nature, can boast equal resources. They would indulge the hope, that your past exertions are to be considered but the indistinct pledge of efforts incomparably more worthy and illustrious ; that, subdued by the sovereign charms of science, you will think no sacrifice too great, no labours too arduous, for her advancement ; that, ambitious for the honour of your native town, you will be anxious that its intellectual interests should rise commensurately with its augmenting wealth and importance, and that, conscious of the accumulating obligations which it has already incurred in those respects to the labours of Philosophy, which have indeed constituted the secret energy of its commercial success, you will avail yourselves of every means of testifying your gratitude, by consecrating some portion of your time and talents, and a few of the products of your exuberant prosperity, to enlarge the boundaries of science itself. There is not only a duty, but the most refined pleasure, in the cultivation and reciprocation of knowledge ; and it is the only pleasure suitable to the character of a rational being, and consistent with its lofty destination. The term of human existence is too short, to be wasted by the passing frivolities of sense, or absorbed in the restless pursuits of a mere ordinary and secular ambition. He only is the genuine Philosopher, who employs it for the nobler purposes of invigorating those “high capacious powers,” with which he is so transcendantly endowed and benevolently entrusted ; and who makes his own attainments in knowledge, however inconsiderable, subservient, in their humble measure, to the happiness and illumination of those around him.

DONATIONS

*To the LIBRARY and MUSEUM received since the Publication of
the last Report.*

Those marked thus * are Members of the Society.

BOOKS.

- | | |
|---|---|
| Anatome Animalium Gerardi Blasii, 1681; Myographia Nova, Joannis Browne, 1684. | } Benj. Goodman, Esq. Leeds. |
| Hugo Grotius, | *Mr. Chantrell, Architect. |
| Sir H. Davy's Agricultural Chemistry, | } *Mr. M. T. Sadler. |
| Chemical Essays on the use of Salt in Agriculture, 2 Vols. | } *Samuel Parkes, Esq. F.L.S. |
| 4th Vol. of Manchester Memoirs, | } President and Council of the Manchester Literary and Philosophical Society. |
| Reports &c. of the Sheffield Philosophical and Literary Society, ... | } President and Council. |

MUSEUM.

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| Fossils from the Bath Oolite, | Mr. Miller, Curator Bristol Society. |
| A small Tortoise, | *Mr. E. K. Bullman. |
| Specimens of Rock, | *Mr. T. Palmer. |
| Thirty Specimens of Fossils from Calcareous Grit and Pickering Clay; Carbonate of Strontian and Sulph. of Barytes, from Merrifield, near Pateley Bridge; Red Oxyd of Lime, | } *Mr. E. S. George, F.L.S. |
| Fifty Fossils from the Oolite, | J. Pickering, Esq. Malton. |
| Forty-five species of Lichens, and Fourteen Crustaceæ, | } Mr. Bean, Scarbro'. |
| Two Fossils, | T. Hinderwell, Esq. Scarbro'. |
| Many fine Fossil Elephant's Teeth, &c. | J. Whitchurch, Esq. Surgeon, Melton. |
| The Skin of a Wild Cat, from Loch-Tay, | } Anonymous. |
| Twelve Specimens of Corals, | *Mr. Teale, Jun. Surgeon, Leeds. |
| A Mole Crickett; Carb. of Strontian, with Sulphate of Barytes, found in Merrifield Lead Mines, above Pateley Bridge, | } Mr. Samuel Johnson, Surgeon, Knaresbro'. |
| 120 Roman Coins, an ancient Quern, &c. &c. | } John Maude, Esq. Moorhouse, near Wakefield. |
| Two magnificent Corals; a Shark's Jaw, and a variety of subjects in Natural History, from St. Domingo, | } Mr. John Hughes Wright, Leeds |
| Several ancient Copper Coins, a Lotus, &c. | } *W. M. Maude, Esq. |
| A fine collection of Fossils, from the Low Moor Iron Works, | } *Mr. Field, Low Moor. |

- Iron Slag, containing Titanium, ...C. Dawson, Esq. Royds Hall.
 A fine specimen of Fossil Wood, ...Mr. Edward Gordon, Leeds.
 A variegated Hare,*Rev. J. A. Rhodes, M.A. Horsforth Hall.
 The skulls of the Walrus, and Polar Bear; and a Polar Bear's Foot, } John Clapham, Esq. Woodhouse.
 Several Minerals & Shells—Flexible Marble, from Sunderland, } *Mr. Sowerby, F.L.S. London.
 Bark of the Lace Tree,Miss Tennant, Liverpool.
 Some Remains of Mummies from the Cathedral at Riga, } Mr. Robinson, Leeds.
 117 Lavas from Vesuvius,*George Banks, Esq. Leeds.
 A complete Northern Canadian dress and an Herbal of Scottish Plants in very fine preservation, } Miss Purvis, Edinburgh.
 An Egyptian Mummy of a Cat, (by Wm. Gott, Esq. } Mr. James Brant.
 Specimens of Coal from Germany, ...Mr. T. Smith, Park Place.
 A Collection of Sulphurs, }
 Twenty-seven Spars and Marbles, from Derbyshire, Roman Pottery, &c. } Col. Smithson, Heath.
 A Narwhals Tooth,Mrs. Schofield, Manor-House, Whitkirk
 Specimens of American Minerals, ...*Samuel Parkes, Esq. F.L.S.
 A Viper,—Horned Owl, &c.Mr. Chapman, York.
 A large Collection of British Insects, Reptiles, &c. &c. } Richard Jaques Atkinson, B.A. Skipwith Hall.
 Several fine Serpents, and a variety of specimens of Indian dress, &c. &c. } Ob. Brook, Esq. Surgeon, Leeds.
 A specimen of Granite,Mr. H. Hobson, Leeds.
 A Collection of Casts of Heads, &c. illustrative of Phrenology, } *John Marshall, Esq.
 A Cast of the Skull of Bruce, King of Scotland, } *Benj. Gott, Esq.
 A Chinese Painting on a dissected leaf, } Mr. Arthur West, London.
 A Fœtus,Chas. Mapother, Esq.
 A Cast Iron Bas Relief Representation of Christ and the Woman of Samaria, found in the Old Palace, Scarbro,' } *Mr. John Atkinson, Jun.
 A Collection of very rare Minerals and flexible Dolomite, from America, } Thos. Mead, Esq. Challey, near Philips Norton, by John Blayds, Esq.
 A valuable Collection of Minerals } David Milne, Esq. Milne-gradden, Berwickshire.
 A fine collection of British Mosses, in 3 vols. very valuable, } Rev. J. Dalton, A.M. F.L.S. &c. &c. Croft Rectory, near Darlington.
 A rare variety of the common Black Bird } Master Pease, Leeds.

TREASURER'S STATEMENT.

LEEDS PHILOSOPHICAL AND LITERARY SOCIETY.

BUILDING FUND.

Disbursements.

	£.	s.	d.
Balance due from the Treasurer	506	13	0
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	£506	13	0

Receipts.

	£.	s.	d.
Five Proprietary Shares	500	0	0
Interest Allowed	6	13	0
	<hr/>		
	£506	13	0

ORDINARY ACCOUNT.

Disbursements.

	£.	s.	d.
Balance due to the Treasurer	28	17	6
Payment to Messrs. West & George on account of Lectures.....	30	0	0
Ditto, Dr. Allen, Ditto			
Ditto, Mr. Rippingille, Ditto.....	21	0	0
Messrs. Osburn and Atkinson	10	0	0
Sundry Payments	309	4	8
Bankers' Commission	0	16	0
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	£499	18	2

Receipts.

	£.	s.	d.
Deposits and Subscriptions	356	9	0
Fines	36	19	0
Chemical Lectures.....	15	9	0
Hieroglyphic Lectures	9	17	0
Phrenological Lectures.....	37	3	6
Interest allowed by the Treasurer	0	6	7
Balance due to the Treasurer	43	14	1
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	£499	18	2

LIST

OF

OFFICERS, COUNCIL, AND MEMBERS.

OFFICERS.

President.....	John Marshall.
Vice-Presidents	{ William Hey.
	{ Rev. R. W. Hamilton.
Secretaries	{ James Williamson, M.D.
	{ John Atkinson, Jun. Solicitor.
Treasurer	Henry Greenwood.
Curator and Librarian	John Atkinson, F.L.S.

COUNCIL.

Rev. W. H. Bathurst, A.M.	Rev. Joseph Hutton, L.L.D.
F. T. Billam,	John Marshall, Jun.
James Entwisle,	William Osburn,
Edward S. George, F.L.S.	Michael Thomas Sadler,
Benjamin Gott,	John Sangster,
Adam Hunter, M.D.	Thomas P. Teale.

Resident at the Hall.....	Mr. Henry Livesey.
Assistant	Mr. John Brewerton.

PROPRIETARY MEMBERS.

William Aldam,	John Cawood,
Robert Arthington,	John Peele Clapham,
John Atkinson, F.L.S.	Samuel Clapham,
Edward Baines,	Samuel Dickinson,
George Banks,	T. P. Dickinson,
R. C. Battye,	John Ellershaw,
Alfred Birchall,	James Entwisle,
Edwin Birchall,	Joshua Field,
John Blayds,	S. G. Fenton,
John Blayds, Jun.	Edward S. George,
Thomas Blayds,	George Goodman,
Richard Bramley,	John Goodman,
James Brown,	B. Gott, <i>Armley-House</i> , 4 shares
W. Wms. Brown,	Henry Gott,
John Blenkinsop,	John Gott,
Christopher Beckett,	William Gott,
William Beckett,	Henry Greenwood,
Thomas Clapham,	William Hey,
Newman Cash,	William Hirst,
Thomas Charlesworth,	Samuel Holdsworth, <i>Wakefield</i> ,
John Charlesworth,	John Jowitt,
Thomas Chorley,	James Leather,

John Luccock,
 William Lupton,
 Charles Makins,
 John Marshall, Headingley. (5
 shares)
 John Marshall, Jun.
 J. G. Marshall,
 Thomas Thompson Metcalfe,
 Thomas Motley,
 Matthew Murray,
 T. B. Pease,
 George Rawson,
 Rev. Jas. Armitage, Rhodes, A.M.
Horsforth-Hall.

Peter Rhodes,
 John Shepherd,
 T. W. Stansfeld,
 George Thackrey,
 Thos. W. Tottie, *Beech-Grove.*
 Thomas Trant,
 John Thackrey,
 John Walker,
 Robert Walker,
 Wm. Walker, *Wilsick.*
 John Wilkinson,
 Peter Willans,
 John Wilson, *Seacroft.*
 Robt. H. Wood.

ORDINARY MEMBERS.

John Atkinson, *East-Parade.*
 John Atkinson, Jun. Solicitor.
 John Atkinson, *Lowerhead-Row.*
 Joseph Atkinson,
 Edward Baines, Jun.
 Thomas Baines,
 James Bedford,
 S. J. Birchall,
 G. W. Bischoff,
 John Bischoff,
 Thomas Bischoff, Jun.
 Matthew Bloome,
 Joseph Bower,
 Thomas Brancker,
 William Brayshaw,
 William Brigg,
 E. K. Bullman,
 Nicholas Brown,
 Charles Brooke,
 John Edward Brooke,
 Rev. W. H. Bathurst, A. M.
Barwick.
 F. T. Billam,
 Thomas Bruce,
 John Cadman,
 Joseph Calvert,
 R. D. Chantrell,
 Edward Chorley,
 Thomas Colbeck,
 John Cudworth,
 Charles C. Corsellis,
 Joseph Dickinson,
 William Smith Dickinson,
 Joshua Dixon,
 John Dixon,
 Lepton Dobson,
 Richard Driver,
 James E. Downing,
 Josiah Davy,
 John Elam, Jun.

Thomas England,
 Edward Farrar,
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SIXTH REPORT

OF

THE COUNCIL

OF

THE LEEDS

Philosophical & Literary

SOCIETY,

AT THE

CLOSE OF THE SESSION,

1825-26.

LEEDS :

PRINTED BY ROBINSON AND HERNAMAN,
COMMERCIAL-STREET.

1826.






REPORT OF COUNCIL,

AT THE

CLOSE OF THE SIXTH SESSION.



Your Council have the satisfaction of meeting the Society at the termination of its Sixth Session, under circumstances not less auspicious than those which have excited your congratulations on former anniversaries.

Without detaining you by any lengthened introduction, they proceed to report the occurrences which have transpired in the history of your Society since their appointment.

A number of gentlemen having signified their disposition to be enrolled amongst you, it was deemed advisable, previous to the expiration of the last recess, to summon a special General Meeting, for the nomination of new members, in order that such might be admitted to the privileges of the institution as early as possible, after the commencement of the business of the session. At that meeting eleven individuals were proposed Ordinary Members, who were afterwards duly elected. The total number of additional Ordinary Members balloted for in the course of the session is eighteen, and of Proprietary, three.

Your Council are happy to state that the funds of the Society, which have often furnished a theme of lamentation, are at length in a situation of comparative prosperity, a small balance of £1. 19s. 3d. being in the Treasurer's hands, on account of the Ordinary Fund, previous to the last meeting of Council, when other necessary orders of payment were made, which, however, will not very seriously involve your finances. For at least one year it is gratifying to know that the expenditure of the Society has not exceeded its income.—Your Council, however, are aware of the difficulty of conducting the affairs of each particular Session, without occasionally mortgaging a part of the pecuniary means of the succeeding one,—a difficulty which will of course not be diminished by the arrangements which have been recently made relative to the appointment of a stipendiary officer. The handsome balance in the Treasurer's hands on behalf of the Building Fund, will not escape your particular notice. If there be a circumstance which proves more decisively than any other the increasing estimation in which your Society is held, it is the fact that notwithstanding the large sum expended in the erection of the Hall, there should be, at the close of the Sixth Session, a surplus of nearly £1200 at your disposal. In the last Report of your Council, a hope was expressed that measures would be speedily adopted, to occupy the plot of land at the west end, with an additional erection, to contain a new Museum and Lecture Room. On more mature consideration, however, it appeared that the sum required for the proposed supplementary building, was so considerable, that no reasonable expectation could be entertained of being able to raise it by the subscriptions of new Proprietary Members for several years. The inconveniences of the present Museum and Lecture Room, but

especially of the former, being found very pressing, it was also concluded that with the pecuniary resources already at the disposal of your Society, some steps might be immediately taken, with a view of making such alterations in the original building, as would render it more adequate to the requirements of the institution. A plan and estimate have been obtained from an Architect, from which it appears that every desideratum may be effected for a sum not exceeding £1000. The proposition has already received the consent of a large majority of the Members at an extraordinary General Meeting, by whom it was referred to the consideration of the Proprietary Members, who have also decided in its favour. Agreeably with your laws, it will be again submitted to the final decision of the Society, and from the opinions already expressed, your Council entertain little doubt that their determination will coincide with that already recorded.* In consequence of an objection urged to the validity of the agreement made with the owners of the adjoining plot of land, it was unanimously resolved at the meeting of the Proprietary Members to relinquish the purchase, the individuals to whom the property belongs having previously signified their willingness to release the Society from its engagement.

The present very respectable resident, Mr. Livesey, whose conduct since his connection with your Hall, has proved uniformly and entirely satisfactory, having intimated his intention of resigning his situation, it became necessary to take some step relative to the appointment of his successor.

* Since the Report was read, the decision of the Proprietary Members has been confirmed by an extraordinary General Meeting of the Society, and a Sub-committee has been appointed to carry the projected alterations into effect as soon as possible.

It had been frequently recommended to engage in the service of your Society, some individual qualified by science and experience to conduct, under the direction of the Curator, the arrangements of the Museum, with an annual stipend, sufficient to enable him to devote his undivided attention to the concerns of the institution, and thereby to relieve the Curator and Secretaries from the pressure of their accumulating duties. The vacation of the situation of Resident, seemed to present a suitable opportunity for submitting to you a proposition of that nature, in consequence of which, your Society came to the important resolution of creating the office of Sub-curator, with an annual salary of £80, leaving the appointment to be filled by the Council. In conformity with that determination, your Council has selected an individual, recommended to their choice by the decided testimonials of gentlemen eminent for scientific attainments, and fully competent to form an opinion of the requisite qualifications.

It may be fairly anticipated, that when the proposed alterations in the building are carried into effect, the Museum, under the assiduous attentions of its new officer, will constitute a highly improved feature of the institution.

With the Society's extensive connections and resources, it is not too much to expect, that the constant labours of a competent individual exclusively devoted to the accumulation and preservation of subjects in Natural History, will accomplish every object which the most sanguine friends of this department can desire. Under the improved arrangements of modern science, which the ample space then afforded will admit, it will become not a mere resort for the gratification of curiosity, but a valuable school of instruction, where the geologist may interpret as they are described on

the fossils, in legible characters, the great revolutions which the crust of the earth has undergone,—where the antiquarian may exercise his skill in elucidating the relics of past times, which may here find a repository,—and where the student of Natural History may learn to refer the diversified forms of the animate and inanimate world to their appropriate place in the scale of Creation, while he admires that Wisdom and Benevolence which appear in their exquisite adaptation to their respective uses.

When your Society perceives, as it does with the greatest satisfaction, the result of the indefatigable industry and science of a zealous naturalist in the town, which have produced a Collection lately opened to public inspection, equal in extent and rarity to any in the North of England, their expectations are greatly increased in reference to the ultimate prosperity of your Museum.

Your Council conceive that they express the real sentiments of the Society, which will require no apology for the digression, when they offer this small tribute of respect to their intelligent fellow-labourer, Mr. Calvert,—who, with no extraordinary resources but such as his own talent and enterprize have supplied, by the unremitting labours of his past life, has furnished a Museum, which is an object of distinguished local attraction, and to all classes a source of rational pleasure and information.

Your Council will not occupy you long in reporting the Philosophical and Literary Proceedings of the past Session. A very able and interesting Course of Lectures on Geology, and Organic Remains, was delivered at your Hall in December and January, by Mr. John Phillips, Honorary Member of the Leeds and of the Yorkshire Philosophical Societies. The use of your Lecture Room was

also granted to Mr. Ogg, for a course of seven Lectures on subjects of Natural Philosophy, to which your Members had free admission.

The General Meetings continue to excite their accustomed interest. The attendance of Members on these occasions has been undiminished. It cannot, however, have escaped your notice that the discussions, which formerly occupied a prominent part of the business of the ordinary meetings, have in some measure languished, in many instances having been wholly omitted. It is unnecessary to remind you, that a proposition was submitted at the last Annual Meeting, to require an immediate and final adjournment after the reading of each paper.

Your Council, however, sincerely hope, since your Society has determined that the discussions should be continued, agreeably with the original intention of the founders of the institution, that those gentlemen who are so well qualified to contribute to their support, will in future afford their best exertions, to infuse new vigour and interest into this very important and attractive part of the proceedings of your General Meetings.

At the commencement of the present Session your Council congratulated themselves and the Society on the prospect of an uninterrupted series of papers until its close. Subsequent experience, however, proved to them that they were not exempt from the influence of those disappointing vicissitudes of which human life affords such frequent illustrations. In consequence of these, their arrangements were, in some instances, considerably modified. The following papers were read in the annexed order, at the several meetings:—

1. "On the Mutual Relations subsisting amongst the several Sciences," by S. Bailey, Esq. President of the Sheffield Literary and Philosophical Society.

2. "On the Connection between Instinct and Reason," by Mr. R. Taylor, Surgeon, read November 18.

3. "On Craniology," by the Rev. R. W. Hamilton, read December 2.

4. "On the Knowledge possessed by the Ancients on the subject of Mineralogy," by the Rev. R. H. Bathurst, A.M. Rector of Barwick-in-Elmet.

5. "On the present State of Education in England, considered as a Preparation for Active Life," by John Marshall, Esq. read January 5.

6. "On the State of Science amongst the Arabians during the Middle Ages," by Mr. John Sangster, read January 19.

7. "On the Fossils discovered in the Neighbourhood of Huddersfield," by Dr. Walker, and "On the Roman Antiquities of Nismes in Languedoc," by Dr. Williamson, both read February 3.

8. "On the Philosophy of Music," by William Hey, Esq. read Feb. 17.

9. "On the Philosophy of Music," Second Part, by William Hey, Esq. read March 3.

10. "On the Philosophy of Ancient Names," by the Rev. Joseph Humphreys, A.B. Perpetual Curate of Bramley, read March 17.

11. "On Marriage Customs," by Benjamin Rotch, Esq. Barrister at Law.

12. "On the Advantages of Classical Education," by the Rev. Joseph Hutton, LL.D. read April 2.

13. "On Stained Glass, and Glass Stainers, from the Invention of the Art to the present Time," by Francis Thomas Billam, Esq. read May 5.

14. "On the Principles of early Education, particularly in reference to the Formation of Infant Schools," by Dr. Williamson, read May 19.

The paper which occupied the attention of your Society at its last General Meeting, was provided in the place of an Essay on the Meteorology of Leeds, and its vicinity, of which it had been deprived by the sudden decease of an excellent and distinguished Member—Mr. Luccock.

The removal of one of the earliest and most efficient friends of the Society, may justify your Council in adopting, on the present occasion, the language of unfeigned condolence, while they offer a passing tribute of respect to his memory. By the death of Mr. Luccock, you have sustained a serious loss. His active habits of mind, the numerous opportunities of observation he had enjoyed, during his long residence in one of those parts of the world comparatively unexplored, where Nature exhibits herself in the most varied and majestic forms, and his ardent love of scientific inquiry, qualified him in an unusual degree to contribute to the objects of your Institution. The great designs of this and of similar institutions,—the diffusion of useful knowledge, and the corresponding increase of human happiness, obtained his peculiar approbation, and no one anticipated with more sanguine emotions the ultimate triumphs of science, and the important accessions to the arts, and accommodations of social life, which would follow in their train. To his industry and liberality you are indebted for a Collection of American Fossils, deposited in your Museum, remarkably interesting, by shewing

the identity of geological character subsisting between the mineral features of our own country and the Continent of Europe, and those of the great Western Hemisphere.—The assiduity with which Mr. Luccock promoted the interests of that temporary association which existed for the space of nearly two years previously to the completion of the present Hall, and the pleasure and information derived from whose meetings have scarcely been surpassed by the more numerous assemblies of the Society itself, will not be forgotten. Bodily indisposition alone prevented that gentleman from realizing the expectations which were then entertained of the extent of his future assistance.

The Essay which he had prepared for the last meeting of the Sessions, had been elaborated, with unusual diligence and research, and from the disclosures he had made of its import and design, it is inferred that it would have thrown new light on an interesting and difficult subject.*

Your Council have not the satisfaction of pointing out any remarkable additions which have been made in the course of the last year either to the Museum or Library. These important departments of your institution, however, have not been overlooked, and it is confidently hoped that when the projected improvements in the building are carried into effect, by which more space will be afforded for the arrangement and exhibition of the objects presented to your Society, a new inducement will be afforded to the liberal contributions of the public.

A review of the labours and occurrences of the past Session afford few topics which demand particular comment.

* Mr. Luccock was the author of "Notes on Rio Janeiro," besides "a Treatise on Wool," and one "On the Cycloid."

Without inviting you to the indulgence of extravagant congratulations, your Council are fully convinced that your Society enjoys as large a measure of prosperity as it has ever possessed,—that it continues to diffuse useful and solid information, and *that* which in the intercourse of life is even more valuable—an enlightened and liberal feeling, and that both in its immediate and remote operation it is gradually realizing those interesting purposes for which it was instituted.

Under these impressions they cheerfully resign the administration of your several affairs to those whom it is your business to appoint this day as their successors.



DONATIONS
TO THE
LIBRARY AND MUSEUM,

Received since the Publication of the last Report.

Those marked thus * are Members of the Society.

BOOKS.

An Address to the Mechanics' Institute—Dr. Alderson, Hull.

A Visit to the Falls of Niagara—John Maude, Esq. Moor-House.

A Monograph, on the Genus *Pselaphus*—Mr. H. Denny, Norwich.

Wright's History of Halifax—*Mr. Leylands, Halifax.

Playfair's Antiquities, 2 vols.—Mr. Bowling, Leeds.

Experimental Researches—Remarks on the Silk Worm—Account of a Shower Bath, by John Murray, F.A.S. presented by the Author.

MUSEUM.

Twenty Fossils—James De Carle Sowerby, Esq. London.

Two Skin Dresses—Mr. Reece Davis, Hull.

The Model of an Indian Canoe—Mr. J. F. Norris, Leeds.

One hundred and fifty-six Copper Coins, two Birds—*Mr. Taylor, Surgeon.

A Spotted Woodpecker—John Berwick, Esq. Scorby-Grove, Lincolnshire.

Two Birds—Mr. Charlesworth, Leeds

Many Minerals and Fossils—Thos. Mead, Esq. Chatley Lodge.

A Wolf, Head of a Morse, &c. Mr. Thomas Robinson, Leeds.

One hundred Casts from celebrated Gems—Mr. John Law, War-Office, London.

An Elephant's Tusk, of great size—Mr. James Wilkinson, London.

A Cast in Alabaster, with Silver, and Copper Coins—Mr. R. Bean, Leeds.

Several Minerals—*Mr. M. Stears, Leeds.

The Skeleton of a Fox—*Mr. Atkinson, Curator.

A Beetle, from Paul-Penang—Mr. Richard Read, Park-Place, Leeds.

A Smoking Pipe, from Athens—Benj. Goodman, Esq.

A Specimen of White Cornelian—Ditto.

Treasurer's Statement.

LEEDS PHILOSOPHICAL AND LITERARY SOCIETY,

AT THE CLOSE OF THE SIXTH SESSION.

BUILDING FUND.

DISBURSEMENTS.		RECEIPTS.	
	£. s. d.		£. s. d.
Balance due from the Treasurer	1113 14 3	Proprietary Shares	1113 14 3

ORDINARY ACCOUNT.

DISBURSEMENTS.		RECEIPTS.	
	£. s. d.		£. s. d.
To Balance due to the Treasurer, 30th June	43 14 1	By subscriptions, 120 members	252 0 0
To various payments	367 10 2	By fines	47 10 0
To interest, commission by bankers	0 14 6	By deposits and subscriptions of 14 new members	73 10 0
To balance in the Treasurer's hands	1 19 3	By receipts at Mr. Sadler's Lectures	6 8 0
		By sale of anatomical drawings	31 10 0
		By present of surplus, from the celebration dinner } committee.....	3 0 0
			<hr/> £413 18 0

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SEVENTH REPORT

OF THE

COUNCIL

OF THE

Leeds Philosophical & Literary Society,

AT THE

CLOSE OF THE SESSION,

1826-7.

LEEDS :

PRINTED BY EDWARD BAINES & SON.

1827.

CHIEF OF BUREAU

1900

REPORT

THE BUREAU OF THE

1900

REPORT OF THE

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1900

REPORT OF COUNCIL,

AT THE CLOSE OF THE SEVENTH SESSION.

IN reporting the state of the Society at the close of the Seventh Session, your Council have it in their power to follow the example of their predecessors, and once more to congratulate the Members upon its continued and increasing prosperity.

The Report of a Literary Society, like the biography of a learned man, necessarily contains not many striking incidents. Those of you, however, who, having watched over this Institution from its commencement, now regard the tokens of its prosperity as the fruits of their vigilance, will doubtless listen with pleasure to the few occurrences about to be reported as its transactions during the year.

At this period of the Society's existence, any very considerable increase in the number of its Members could scarcely be anticipated ; since it may be fairly presumed that its merits are now

perfectly known, and that it is already joined by all within the sphere of its influence, for whom the pursuits it encourages possess sufficient attractions. Notwithstanding, four new ordinary Members have been elected during the Session, and many transfers of tickets have taken place, in conformity with the existing regulations.

The Council have pleasure in submitting a favourable account of the state of the Society's Funds. The balance in the Treasurer's hands on the Ordinary Fund is £50 7s. 3d., exclusive of £33 in arrears, though the Salary of the Sub-Curator is a demand upon it which it had not to supply in former years, and though it has been deemed expedient to devote a larger sum than usual to the purchase of standard works for the Library.

Their Report upon the Proprietary Fund is even still more favourable. The building Committee, appointed at the last Annual Meeting, have carried into effect the resolutions which were then proposed relative to the alterations of the Hall, and have appropriated for the purpose the large balance in favour of this Fund, which was noticed in the last Report.

The following alterations have been completed under the superintendence of Messrs. Watson and Pritchett, of York :—

The inconveniences which arose from the arrangement of the seats in the Lecture-room have been entirely removed : and it is now well adapted, in every respect, to the purposes for which it was intended.

A Mineral-room has been built over the Laboratory ; which will afford an opportunity of systematically arranging, and advantageously exhibiting, the Society's extensive and valuable collection in this department.

A room has also been obtained in the intermediate story, to be used by the Sub-Curator as a work-room.

The Museum has been considerably heightened, so as to admit of a gallery round it, and an upper light has also been added.

A part of the back-yard has been walled off, for the purpose of opening a road into the cellars, so as to render them available for commercial purposes.

The particulars of these alterations have been already detailed in the Report of the Building Committee. The cost of the whole has been £1300. When it is stated that the cellars are already

let to Mr. Nell at an annual rent of £45, after retaining as much of them as can possibly be serviceable to the Society, it will at once appear that this sum has been judiciously expended.

A balance of £192 1s. 10d. is still due to the Society, on account of the Proprietary Fund.

The Council have great pleasure in reporting, that Mr. Denny, who was appointed Sub-Curator by their Predecessors, is in every respect qualified for the office. The value of his services can be fully estimated at present, when many new arrangements are necessarily taking place.

It is intended that the antiquities, works of art, &c. shall be deposited in the room in which the books were formerly kept, in order that the Museum may be entirely devoted to subjects of Natural History. The books have been removed into the Apparatus Room, which has been fitted up as a Library, the Council being unanimously of opinion that they would be much more convenient for reference here, than in their former situation.

The Donations to the Museum have been numerous during the year. The following are particularly important :

A valuable present of Icelandic Minerals, from the Rev. W. Vernon.

A Collection of French Fossils, from Messrs. Sowerby, to whom the Society has before been indebted for many valuable Specimens.

Some fine Specimens of Zeolitic Minerals, from the Rev. W. H. Bathurst.

A large Collection of Fossils, from the Lias and Oolite of the South of England—Thomas Meade, Esq. Chatley.

A unique Specimen of a Fossil Plant, (*Syringodendron*) presented by the Rev. Samuel Sharp, and Mr. Wilby, of Wakefield.

Besides these, there has been an addition to the Museum in the course of the Session, the record of which ought to form a prominent feature in the present Report. The sale of Sir Alex. Crichton's Minerals, in London, afforded an opportunity of enriching the Society's already extensive collection in this department, which the Council would not have felt themselves justified in overlooking; and, the state of the funds not permitting them to make any grant for such a purpose, the Secretaries were requested to apply to the Members individually, to ask their assistance in effecting it. The Council thankfully acknowledge the promptness and liberality with which this call was answered—£80 were very speedily collected, and, with this sum, nearly 250 specimens

of some of the rarest and most beautiful of the Russian and Siberian Minerals have been procured, which it is highly improbable that another opportunity of acquiring would ever again have occurred. This splendid proof of the interest taken in the Museum by the Members generally, encourages the Council confidently to hope, that when the Hall shall again be opened for public inspection, and the friends of the Society have an opportunity of seeing the ample means afforded for the display of any marks of their liberality which they may be inclined to deposit there, the very large space they have now to report vacant will not long remain unoccupied. Specimens in all the different branches of Zoology will be particularly acceptable. And in every other department there is room for the advantageous arrangement, not only of every thing we now possess, but also of a very large additional number of articles. So that all cause for the complaint, that specimens or curiosities sent to the Hall were not exhibited, which has deprived the Museum of many valuable accessions, will, from henceforth, be entirely removed.

The scientific and literary proceedings of the Society are by no means inferior in interest to those of former years. Two Courses of Lectures have been delivered during the Session. The subject of the first was "The Invertebral Animals," for

which very instructive Course the Society was indebted to its Honorary Member, Mr. Phillips. The lecturer took a general view of the whole of this division of animated nature, but confined his particular remarks to the molluscou and crustaceous tribes; and not only gave abundant proofs of his competency to the difficult subject he had undertaken, but afforded much information upon matters to which little attention has been hitherto paid in this country. As might have been anticipated, these Lectures were listened to with great attention by a numerous audience.

The other Course of Lectures was delivered by Mr. Wood, of London, upon "Ancient History, as connected with Architecture." The merits of these popular Lectures are too well known to need any remark whatever; they were numerously attended, and much and deservedly admired.

Many of the papers read during the year having been furnished by individuals of their own body, it does not become the Council to offer any opinion respecting them; they cannot refrain, however, from expressing their satisfaction at the friendly reception which they uniformly met with from the Society.

The following papers have been read at the Ordinary Meetings of the Session :—

- 1 The Twentieth Century (in verse)—by Mr. West—
(read Nov. 3rd, 1826.)
- 2 On the Varieties of the Human Race—by Rowland
Morris Fawcett, Esq. M.D.—(read Nov. 17th,
1826.)
- 3 On the revival of Learning in Italy—by James
Entwisle, Esq.—(read Dec. 1st, 1826.)
- 4 On the Limits of Human Knowledge—by the Rev.
W. H. Bathurst, the President—(read Dec. 15th,
1826.)
- 5 On the Functions of the Brain—by Mr. William
Wildsmith—(read Jan. 5th, 1827.)
- 6 On the Origin and History of Printing, with some
account of the most celebrated Printers, and of the
principal public Libraries of Europe—by Mr. Edward
Baines, Jun.—(read Jan. 19th, 1827.)
- 7 On the necessity, the wisdom, and glory of cherishing a
National Spirit in the Patronage of the Fine Arts,
and a National Pride in the excellence of British
Artists—by Wm. Carey, Esq. of London—(read
Feb. 2nd, 1827.)
- 8 On the Anatomy of Expression in Painting and Sculp-
ture—by Mr. John Hey—(read Feb. 16th, 1827.)
- 9 On the Signs of Inns and Shops—by Francis Thomas
Billam, Esq.—(read March 2nd, 1827.)
- 10 On Egypt, its former Magnificence, and Antiquities,
Manners, Customs, &c. &c.—by John George Wood,
F. S. A.—(read March 16th, 1827.)

- 11 On the Philosophy of Names—by the Rev. Robert Humphrey—(read April 6th, 1827.)
- 12 On the Mechanical Effect of Rain, Rivers, and the Sea, and on the Materials which compose the Surface of our Planet—communicated by Mr. John Phillips—(read April 20th, 1827.)
- 13 On Egyptian Mummies—by Mr. Wm. Osburn, Jun.—(read May 4th, 1827.)
- 14 On the discovery of Crystals of Pyrites in some old Blocks of Wood, dug up at Whitby—communicated by the Rev. George Young, A. M. of Whitby.
- 15 On the Principles which should guide us in the Choice of our Intellectual Pursuits—by the Rev. J. Hutton, LL. D.—(read May 18th, 1827.)

The subjects of all these papers were afterwards discussed, often at considerable length. It gives the Council pleasure to report that the hint of their predecessors respecting this part of the business of the Ordinary Meetings has been punctually attended to.

Having thus laid before the Society a plain, unadorned statement of the proceedings of the Session, the Report of the Council is necessarily at an end. They have only to remark, in conclusion, that if this Society be instituted for the purpose of diffusing around it a taste for the pure, intellectual

pleasures of science and literature, to the exclusion of the grovelling, debasing pursuits, which too often occupy the leisure of those engaged in commerce, no association whatever can have more entirely realised the wishes of its founders, or answered more completely the purposes of its Institution, than that, the Anniversary of whose formation we are this day met to commemorate.

TREASURER'S STATEMENT.

LEEDS PHILOSOPHICAL AND LITERARY SOCIETY,

AT THE CLOSE OF THE SEVENTH SESSION.

DISBURSEMENTS.

To various Payments.....
 Commission by Bankers.....
 Balance due from the Treasurer.....

1245 5 6
 1 6 9
 192 1 10
 1438 14 1

PROPRIETORY FUND.

By Balance in Treasurer's Hands.....
 Three Proprietary Shares.....
 Interest allowed by Bank.....

1113 14 3
 300 0 0
 24 19 10
 1438 14 1

RECEIPTS.

DISBURSEMENTS.

To various Payments.....
 Commission by Bankers.....
 To Balance due from the Treasurer.....

376 7 6
 1 1 0
 50 7 3

ORDINARY FUND.

RECEIPTS.

By Balance in Treasurer's Hands.....
 Subscriptions, 130 Members.....
 Fines.....
 Deposits and Subscriptions of Six New Members.....
 Arrears.....
 Receipts at Mr. Wood's Lectures.....
 Do. Mr. Phillip's do.....
 Received of Major Bell for the Lecture Room
 By Dividends on Dobson's and Wentworth's
 Notes.....

1 19 3
 273 0 0
 53 3 0
 29 8 0
 16 8 0
 31 10 6
 12 11 0
 6 6 0
 3 10 0

427 15 9

80.0.0

treasurers

427 15 9

80.0.0

Sept. 7

Figure 4. Effect of Ca^{2+} on the Ca^{2+} fluxes in the presence of Ca^{2+} and Ca^{2+} fluxes in the presence of Ca^{2+} .

... ..

THE UNIVERSITY OF CHICAGO

1. *Phragmites australis* (Cav.) Trin. ex Steud.

100

100

Figure 1 consists of nine micrographs arranged in a 3x3 grid. Each micrograph shows a central dark spot, which represents bacterial growth. The top row shows the control (0.0001 µg/ml), 0.001 µg/ml, and 0.01 µg/ml. The middle row shows 0.1 µg/ml, 1 µg/ml, and 10 µg/ml. The bottom row shows 100 µg/ml, 1000 µg/ml, and 10000 µg/ml. The control and 0.001 µg/ml concentrations show growth, while the 0.01 µg/ml and higher concentrations show no growth.

1. *Introduction*

100

(continued)

DONATIONS

TO

THE SOCIETY'S MUSEUM.

*Those marked thus * are Members of the Society.*

GEOLOGY AND MINERALOGY.

1826.

JULY 1st.

10 Select Specimens of Icelandic Minerals.

Rev. W.V. Vernon, F.R.S.,
F. G. S. Pres. York.
Phil. Soc., Hon. Mem.
Leeds Phil. and Lit.
Society.

A vitreous Sand Tube, formed by
Lightning, from the Coast, near
Drigg, Cumberland.

J. H. Hodson, Esq. Goole.

AUGUST 21st.

100 Rock Specimens, illustrative of the
Geology of Scotland.

69 Rock Specimens from the district of
Snowdonia, North Wales.

* Mr. E. S. George, F.L.S.
Secretary.

Fossils from the Norwich Chalk.

Mr.S.Woodward, Norwich.

SEPTEMBER 6th.

9 fine Minerals from India

H. Wallis, Esq. London.

OCTOBER 10th.

62 Specimens of French Fossils

James de C. Sowerby, Esq.
F. L. S., Hon. Mem.
Leeds Ph. & Lit. Soc.
& C. E. Sowerby, Esq.
Mead-place, Lambeth.

NOVEMBER 3rd.

Splendid Specimens of Mesotype, Chabasie, Mesoline, Apophyllite, and Celestine upon Sulphur.

} * Rev. W. H. Bathurst,
President, Barwick-
in-Elmet.

A Collection of Minerals and Geological Specimens, from the Lake-district of Westmoreland and Cumberland.

} * J. Atkinson, Jun. Esq.
Leeds.

Fossil Molar Tooth of an Elephant, from the Coast at Happisborough, Norfolk.

} Mr. S. Woodward, Norwich

NOVEMBER 17th.

15 rare North American Minerals

} Thomas Meade, Esq. Hon.
Mem. Leeds Ph. and
Lit. Soc., Chatley.

DECEMBER 28th.

An interesting Collection of Fossils from the Coal Measures, Lias, Oolite formation, Green Sand and Chalk, of Wiltshire and Somersetshire.

} Thomas Meade, Esq. Hon.
Mem. Leeds Ph. and
Lit. Soc., Chatley.

JANUARY 10th, 1827.

Specimens of Whin from the Dyke in Hartley Colliery, and of charred Coal from the parts of the Seam in contact with the Dyke.

} * James Leather, Esq.
Beeston Park.

FEBRUARY 9th.

The Head of a Fossil Animal from the Haigh Moor Measures at Waterloo Colliery.

} * Mr. E. S. George,
F. L. S. Secretary.

20 Specimens of Yorkshire Fossils.

FEBRUARY 24th.

A Specimen of Sulphate of Barytes from Roundhay.

} Mr. John Calvert, Leeds.

FEBRUARY 27th.

2 Specimens of Carrara Marble.
Asbestos from Carrara.

} * Mr. E. Baines, Jun.

- | | | |
|---|---|-----------------------|
| Iron Pyrites—Carrara. | } | * Mr. E. Baines, Jun. |
| Marble from Vesuvius. | | |
| Sulphur from Vesuvius. | | |
| Lava incrustated by Sal Ammoniac—
Vesuvius. | | |
| 4 Specimens of Lava—Vesuvius. | | |
| 4 fine Crystals of Leucite. | } | * Mr. John Smallpage. |
| Portion of a Basaltic Column from the
Giant's Causeway, Ireland. | | |

APRIL 9th.

Specimen of Peacock Coal John Clapham, Esq.

APRIL 10th.

- | | | |
|---|---|---|
| A magnificent Specimen of Syringoden-
dron, from a Sandstone Quarry, at
Altofts, near Wakefield, the entire
length 9 feet. | } | Rev. S. Sharp, Hon. Mem.
Leeds Ph. & Lit. Soc.
Wakefield, and Mr.
Wilby, of Wakefield. |
| Felicitas decurrens (Artis) Alverthorpe,
near Wakefield. | | |
| A fine Specimen of Fern. | } | Rev. S. Sharp, Hon. Mem.
Leeds Phil. and Lit.
Society. |
| Pecopteris (Brogniart). | | |
| Specimen of Variolaria Ficoides. | | |
| A Mass of Iron Stone, filled with
Fossil Shells, (Unio subconstrictus)
Wakefield. | | |

APRIL 22nd.

- | | | |
|---------------------------------|---|-------------------------------------|
| Cycas—Saltwich. | } | Yorkshire Philosophical
Society. |
| Gryphœa dilatata, Cave. | | |
| Plagiostoma leviusculum—Malton. | | |
| —— rigidum. | | |
| Pecten imbricatus. | | |
| lens. | | |
| fibrosus. | | |
| Venus. | | |
| Cerithium. | | |
| Astacus. | | |
| Inoceramus—Hunmanby. | } | |
| Fossil Fish—Barrow on Soar. | | |
| Hypersthene—Labrador. | | |

APRIL 23rd.

A fine Specimen of Ruby Copper— } John Clapham, Esq.
Cornwall

MAY 24th.

Uncommonly lengthened prismatic black
Tourmaline, on a large prism of
dark brown Quartz, with Cleave- } * Mr. George Hirst.
landite, Catherineberg, from Sir
A. Crichton's Collection.

A Splendid Collection, consisting of 250 Specimens purchased at the
Sale of Sir A. Crichton's Minerals, for the Sum of Eighty-four
Pounds, subscribed by the following Members:—

SUBSCRIBERS OF TWO GUINEAS.

Wm. Aldam.	John Gott.
T. B. Pease.	Edwin Smith.
C. Beckett.	John Marshall, Jun.
Thomas Blayds.	Rev. W. H. Bathurst.
W. Williams Brown.	William Beckett.
Benjamin Gott.	James Entwisle.
John Goodman.	Wm. Hey.

SUBSCRIBERS OF ONE GUINEA.

F. T. Billam.	R. H. Wood.
John Kendall	Benjamin Watson.
D. B. Mouncey.	W. Watson.
John Sangster,	John Cudworth.
T. W. George.	R. E. Payne.
John Wilkinson.	S. Hare.
Thomas Charlesworth.	Charles Chippindale.
Richard Kemplay.	George Nelson.
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Newman Cash.	E. Baines, Jun.
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Thomas Bruce.	John Oastler.
William Osburn, Jun.	Edwin Birchall.
E. S. George.	James Leather.
John Heaton.	John Atkinson.
Samuel Clapham.	W. Hargreaves.
G. W. Bischoff.	John Hey.
Edwin Heycock.	George Shaw.
Charles Cope.	William Hey, Jun.
George Thackrey.	B. Hallewell.

John Thackrey.
C. Brooke.
Richard Bramley.
A. Hunter, M. D.

Thomas Motley.
Robert Arthington.
Thomas Trant.
Rev. R. W. Hamilton.

ZOOLOGY, ORNITHOLOGY, & ENTOMOLOGY.

JULY 1st, 1826.

A Collection of Foreign Shells.....	J. H. Hodson, Esq. Goole.
A Boar's Head	Mr. Johnson, Mill Hill.
A Seal (<i>phoca vitulina</i>)	* T. W. Tottie, Esq.
A Young Ring Ouzel	{ * Mr. W. Osburn, Jun. Sec.
An Eider Drake and a Gull.....	John Clapham, Esq.
A Specimen of Nautilus Argo and some Echini.	{ Mr. Edward S. Brett.
22 Specimens of Crustaceous Animals.	{
17 Birds.	{ Mr. John Moore, of Rio
3 Bats and an Opossum, from South America.	{ Janeiro.
A number of British Insects	Mr. H. Denny, Sub-Curat.

SEPTEMBER 6th.

Mytilus Polymorphus	{ James de C. Sowerby, Esq. and C. E. Sow- erby, Esq.
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OCTOBER 16th.

136 Specimens of British Insects.....	{ Joseph Sparshall, Esq. F. L. S., Norwich.
2 Pair of Vanessa Cardui.....	Mr. Sexton, Norwich.

DECEMBER 4th.

Male and Female of the North American Bittern.	{
Golden Woodpecker, male.	
Woodcock (American)	
Red-breasted Thrush.	
Golden-crested Wren.	
Testudo Lutraria.	
15 Insects.	Mr. Wm. Heycock, Leeds.

FEBRUARY 9th, 1827.

Strix Flammea	{ * Mr. John Atkinson, East Parade.
4 Specimens of Sciurus Vulgaris.....	{ * Rev. W. H. Bathurst, President.
Corvus Corone.	{ * Mr. Wm. Osburn, Jun. Secretary.
—— Frugilegus.	
Testudo	Mr. Wm. Heycock.
A Specimen of Columba Livia.....	Mr. C. Cope, Jun.

FEBRUARY 10th.

A Specimen of the Harp Seal (<i>Phoca Greenlandica</i>)	{ Purchased by the Society.
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FEBRUARY 22nd.

Anas Fuligula.	{ * Mr. Wm. Osburn, Jun. Secretary.
Fringilla Cœlebs:	

APRIL 11th.

A mottled variety of Mus Musculus...	Mr. James Sherwin.
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APRIL 23rd.

5 Specimens of British Birds.	{ Mr. Robert Leyland, Hon. Mem. Leeds Phil. and Lit. Society.
Larus Marinus.	
Mergus Albellus.	
Recurvirostra Avocetta.	
Anas Acuta.	
Mergus Castor.	

MAY 16th.

A fine stuffed Specimen of Larus Canus,	* Mr. John Heaton.
Falco Nisus.	{ * Rev. W. H. Bathurst, President.
Strix Stridula.	
Hirundo Urbica.	

COINS, &c.

1826.

JULY 1st.

6 Silver Coins Mr. J. Moore, Rio Janeiro.

DECEMBER 4th.

2 American Coins Wm. Heycock, Esq.

JUNE 14th, 1827.

Specimens of Cloth, from the Sandwich
Islands, brought by Mr. Ellis, the
Missionary. } Rev. E. Parsons, Leeds.

Fac simile of the Inscription on the
Rosetta Stone. } F. T. Bilham, Esq.

COMPARATIVE ANATOMY.

Skeletons of the..... Rat, (*Mus decumanus*.)
Mouse, (*Mus musculus*.)
Squirrel, (*Sciurus vulgaris*.)
Mole, (*Talpa Europæa*.)

Craniums of the..... Squirrel, (*Sciurus vulgaris*.)
Rat, (*Mus decumanus*.)
Mouse, (*Mus Musculus*.)
Mole, (*Talpa Europæa*.)
Newfoundland Dog, (*Canis Terræ Novæ*.)
Horse, (*Equus Caballus*.)
Sheep, (*Capra Ovis*)
Swine, (*Sus Scrofa*.)
Common Seal, (*Phoca Vitulina*.)
Greenland Seal, (*Phoca Grænlantica*.)
Buzzard, (*Falco Buteo*.)
Rook (*Corvus Frugilegus*.)
Canary, (*Fringilla Canaria*.)

DONATIONS TO THE LIBRARY.

1826.

DECEMBER 7th.

- | | | |
|--|---|-------------------------------------|
| De Clifford, a Poem..... | { | R. H. Kennedy, M. D.
the Author. |
| First, Second, and Third Reports of the
Hull Literary and Philosophical
Society. | { | Hull Lit. and Phil. Society. |
| Second and Third Reports of the Shef-
field Literary and Philosophical
Society. | { | Sheffield Lit. and Phil. Soc. |

FEBRUARY 9th, 1827.

- | | | |
|---|---|------------------------------------|
| Reference to the Patronage of the Fine
Arts. | { | William Carey, Esq. the
Author. |
|---|---|------------------------------------|

MARCH 17th.

- | | | |
|--|---|-------------------------------------|
| Reports and Laws of the Royal Society
of Literature. | { | Royal Soc. of Literature. |
| Report of the Yorkshire Philosophical
Society for 1826. | { | Yorkshire Philosophical
Society. |

APRIL 3rd.

- | | | |
|--|---|-----------------|
| Discours de la Religion des anciens Ro-
mains—par Guillaume du Choul. | { | * Mr. John Hey. |
|--|---|-----------------|

MAY 16th.

- | | | |
|---|---|----------------------------|
| Report of the Whitby Literary and Phi-
losophical Society. | { | Whitby Lit. and Phil. Soc. |
|---|---|----------------------------|

BOOKS

PURCHASED BY THE SOCIETY, DURING THE SEVENTH SESSION.

Cuvier's Theory of the Earth.

Plates of Hieroglyphics, published by the Royal Society of Literature.

Transactions of the Royal Society of Literature.

Passalacqua's Catalogue.

A. Mai's Catalogue of the Papyri in the Vatican.

Sir Humphry Davy's Discourses.

* Cuvier's Fossil Osteology.

* Curtis's British Entomology.

* Sowerby's Mineral Conchology.

* Annals of Philosophy and Philosophical Magazine.

* The Quarterly Journal of Science, Literature, and Arts.

* Brewster's Journal.

* Edinburgh Philosophical Journal.

* Zoological Journal.

The Words marked with an Asterisk are in continuation.

LIST

OF

OFFICERS, COUNCIL, AND MEMBERS.

OFFICERS.

President	Rev. W. H. Bathurst, A. M. Rector of Barwick-in-Elmet.
Vice-Presidents	{ Michael Thomas Sadler. James Williamson, M. D.
Treasurer	William Williams Brown,
Secretaries	{ E. S. George, F. L. S. Wm. Osburn, Jun.
Curator and Librarian	John Atkinson, F. L. S.
Sub-curator	Henry Denny.

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Francis T. Billam.	Adam Hunter, M. D.
Joshua Dixon.	Rev. Joseph Hutton, LL.D.
James Entwisle.	John Marshall, M. P.
Rev. R. W. Hamilton.	John Sangster.
William Hey.	T. P. Teale.

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Robert Arthington.	John Blayds, Jun.
John Atkinson, F. L. S.	Thomas Blayds.
Edward Baines.	Richard Bramley.
George Banks.	James Brown.
R. C. Battye.	William Williams Brown.
Alfred Birchall.	John Blenkinsop.



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William Beckett.
Newman Cash.
Thomas Charlesworth.
John Charlesworth.
Thomas Chorley.
John Cawood.
John Peele Clapham.
Samuel Clapham.
Thomas Clapham, *Potternewton*.
Samuel Dickinson.
T. P. Dickinson.
John Ellershaw.
James Entwisle.
Joshua Field.
S. G. Fenton.
Edward S. George, F. L. S.
George Goodman.
John Goodman.
B. Gott, *Armley-House*, (5 shares.)
John Gott.
William Gott.
Henry Greenwood.
William Hey.
Joseph Holdsworth, *Wakefield*.
James Holdforth.
John Jowitt.
Richard Kemplay.
James Leather.

John Luccock.
William Lupton.
Charles Makins.
John Marshall, M. P. *Headingley*,
(4 shares.)
John Marshall, Jun.
J. G. Marshall.
Henry Cowper Marshall.
Thomas Thompson Metcalfe.
Thomas Motley
T. B. Pease.
George Rawson.
Rev. Jas. Armitage Rhodes, A. M.
Horsforth Hall.
Peter Rhodes.
John Shepherd.
T. W. Stansfeld.
Thomas Teale.
George Thackrey.
John Thackrey.
Thomas W. Tottie, *Beech Grove*.
Thomas Trant.
John Walker.
Robert Walker.
William Walker, *Wilsick*.
John Wilkinson.
Peter Willans.
John Wilson, *Seacroft*.
Robert H. Wood.

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John Atkinson, *East-Parade*.
John Atkinson, Jun. Solicitor.
John Atkinson, *Lowerhead-Row*.
Joseph Atkinson, *Halton*.

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Edward Allison.
Edward Baines, Jun.
Thomas Baines.

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 Joseph Bower.
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Barwick-in-Elmet.
 F. T. Billam.
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 Charles Chippindale.
 John Cudworth.
 Charles C. Corsellis.
 Samuel Chapman.
 Charles Cope.
 Joseph Dickinson.
 William Smith Dickinson.
 Joshua Dixon.
 John Dixon.
 Lepton Dobson.
 Richard Driver.
 Josiah Davy.
 Albert Davy.
 John Elam, Jun.

John William Elam.
 Thomas England.
 Richard Farrar.
 James Fenton.
 J. P. Garlick.
 Thomas W. George.
 Joseph Giles.
 Edward Halliley.
 Rev. R. W. Hamilton.
 Samuel Hare.
 Christopher Heaps.
 John Heaton.
 James Hebden.
 John Hernaman.
 William Hey, Jun.
 John Hey.
 George Hirst.
 John Hogg, Jun.
 John Horsfall.
 John Hopps.
 Adam Hunter, M. D.
 John Hutton.
 Benjamin Hallewell.
 Rev. Joseph Hutton, LL. D.
 Edwin Heycock.
 William Hall, Jun.
 William Hargreaves.
 Jonathan Ikin.
 John Kendall.
 Caleb E. Langdon.
 John Lapage.
 Charles Lee.
 William Lister.
 Jonathan Lupton.
 John Lee.

Edward Lee.
 Joseph O. March.
 Wm. Maddy.
 Charles Matthewman.
 Thomas Horncastle Marshall, Bar-
 rister-at-Law.
 James Motley.
 John Mitchell.
 Rev. J. P. Malleson, A. B.
 D. B. Mouncey.
 J. W. Moore.
 Joseph Motley.
 Joshua Muff.
 Joseph Murphy.
 George Nelson.
 Richard Newlove.
 John Oastler.
 George Hamer Oates.
 William Osburn, Jun.
 Richard E. Payne.
 William Price.
 Thomas Prince.
 J. Procter.
 Henry Rawson.
 John Rothery.
 J. H. Ridsdale.
 Mervyn Richardson.
 Michael T. Sadler.
 John Sangster.
 T. S. Shann.
 George Shaw.
 William Shaw.
 John Hope Shaw.
 Edwin Simpson.
 William Simpson.
 John Smallpage.

Edwin Smith.
 William Smith.
 Robert Scarth.
 Gilyard Scarth.
 C. H. Schwanfelder.
 Samuel Smith.
 William Morley Stears.
 John Sturdy.
 C. Smith.
 C. Sykes.
 Thomas Shann.
 Thomas P. Teale.
 Joseph M. Tennant.
 Thomas Tennant.
 R. W. D. Thorp, M. D.
 Robert Taylor.
 William Trant.
 Thomas Turkington.
 John Thackrey.
 William Wildsmith.
 Thomas G. Ward.
 Geo. Walker, *Killingbeck Lodge*.
 Thomas Walker, *Killingbeck*.
 Benjamin Watson.
 William Watson.
 William Watson, Jun.
 Charles Wellbeloved, Jun.
 William West.
 Jonathan Wilks.
 James Williamson, M. D.
 J. Hirst Whitehead.
 David Wood.
 Joseph Womersley.
 Samuel Wormald.
 John Wade.
 John Wilkinson.

HONORARY MEMBERS.

Charles Waterton, Esq. *Walton-Hall.*

J. Montgomery, Esq. *Sheffield.*

M. Allen, M. D. *Epping Forest.*

Wm. Smithson, Esq. *Heath.*

J. Drake, M. D. *Cincinnati.*

Sir Humphry Davy, Bart. P. R. S.
London.

Thos. Meade, Esq. *Chatley-Lodge,*
near Bath.

James De Carle Sowerby, Esq.
F. L. S., *London.*

George Birkbeck, M. D., F. R. S.
London.

Wm. M. Maude, Esq. *Leeds.*

John Dalton, Esq. F. R. S. *Manchester.*

John Spear, Esq. *London.*

Mr. John Robert Leyland, *Halifax.*

John Field, Esq. *Low-Moor.*

Rev. S. Sharp, A. M. *Wakefield.*

George Goldie, M. D. *York.*

Rev. W. V. Vernon, F.R.S. M.G.S.

Pres. of the Yorkshire Philo-
sophical Society, *Wheldrake.*

David Brewster, L.L.D., F.R.S.
Edinburgh.

Samuel Park, Esq. F.L.S. M.G.S.
London.

Benj. Rotch, Esq. F. A. S.

Thomas Stuart Traill, M. D. *Liverpool.*

W. Smith, Esq. Mineral Surveyor.

E. Milligan, M. D. *Edinburgh.*

W. Henry, MD. FRS. *Manchester.*

Thomas Campbell, Esq. *London.*

S. T. Coleridge, Esq. *London.*

W. Dykes, Esq. *Hull.*

Rev. G. Young, A. M. *Whitby.*

John Alderson, M. D. *Hull.*

Mr. John Phillips, Lecturer on
Geology, *York.*

John K. Walker, M. D. *Huddersfield.*

EIGHTH REPORT

OF THE

COUNCIL

OF THE

Leeds Philosophical and Literary Society,

AT THE

CLOSE OF THE SESSION,

1827-8.

LEEDS :

**PRINTED BY ROBINSON AND HERNAMAN,
COMMERCIAL-STREET.**

1828.

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REPORT OF THE COUNCIL,

AT THE

CLOSE OF THE EIGHTH SESSION.

IN reporting the state of the Society at the close of the Eighth Session, it affords your Council the greatest pleasure to be able to repeat the congratulations, which have pervaded your former Reports.

The number which your Society had enrolled amongst its Members, left little to be expected as to future increase. Yet, at the commencement, and during the progress of the present Session, nineteen ordinary Members have been elected.

Your Council have the satisfaction to report, that, notwithstanding the increased expenditure required by the enlargement of the Museum, the Funds of the Society are in a more flourishing state than at any former period. During the last year, the Mineral-Room has been fitted up

at an expense of about one hundred pounds; and a considerable sum has been expended in displaying, in a suitable manner, the valuable Egyptian Antiquities. After every demand upon the Ordinary Fund has been satisfied, a balance of £100. 5s. 7d. remains in the hands of the Treasurer.

In the course of the present Session, the Society's valuable collection in Mineralogy and Geology has been arranged, and a systematic catalogue completed. In the arrangement of the Minerals, chemical composition has formed the basis of classification. The valuable donation made by some of your Members during the last Session, from the collection of Sir A. Crichton, added to the numerous specimens before in the possession of the Society, leaves but few blanks in the species of Minerals, although much remains to be done in supplying the varieties. However, your collection is now in such a state as to afford great facilities to the student, and is sufficient to enable him to acquire some considerable knowledge of the subject.

The Geological specimens, especially the Organic Remains, have also been arranged, and for the most part named. The Fossils of York-

shire have been placed according to the position of the strata, thus forming an interesting collection, illustrative of the geology of the county. Your Council would impress upon the Society, the importance of attending to this department of your Museum; for, although it would be hopeless to attempt a very extensive collection of foreign specimens, yet here, at a trifling expense, and with a little exertion, the collection may be rendered not only respectable and valuable in the information it will convey; but will furnish a complete illustration of the history of the county, in its most interesting products.

The Organic Remains of the British Strata have been arranged together in the order of their stratification. This mode (first proposed by a gentleman* whose name we have the honour to enroll amongst our Members, and to whom the science of Geology is deeply indebted,) very much facilitates the identification of strata in the various parts of their courses, and more than any other, offers to the student a correct view of practical geology. This part of your collection

* Mr. William Smith.

contains Fossils from the Lias, Oolite, and green sand beds of Dorset and Wiltshire; which, with many other Fossils and Minerals, your Society owes to the liberality of Thomas Meade, Esq. of Chatley; some Fossils from the chalk and superior beds presented by Mr. Woodward, of Norwich, a fine set of specimens from the Mountain Limestone of Ireland, by Messrs. Sowerby, of London, with several specimens from the Dudley Limestone and other parts of the British Strata, presented by Members of the Society. Of Foreign Organic Remains, your Society possesses but few specimens; amongst them are some good Fossils from the Paris Basin, and an exceedingly beautiful encrinite, from the Magnesian Limestone of Brunswick. The parts of your collection now described, are arranged in cases in the centre and on the sides of the Mineral Room; in the drawers are a set of Rock Specimens from the Mountain districts of North Wales, Westmoreland and Scotland, forming a very entire series of the primitive, transition, and trap rocks of the island; besides these are sections of rocks from the Mountain Limestone, Coal district, and Oolite range of Yorkshire, and a very complete set of Volcanic Rocks from Vesuvius, presented by one of your Members.

In the other departments of Natural History, besides the presents appended to this Report, several additions have been made by your Sub-Curator, Mr. Denny. The hitherto unfinished state of the large room in your Museum, intended to be solely devoted to these subjects, has prevented much progress being made in the classification. Your Council have the pleasure to report, that they have made arrangements for the entire completion of this room, and although at a very considerable expense, yet on such terms as will not press inconveniently upon the Funds of the Society. In the Gallery has been placed the collection of Antiquities and Works of Art, including many interesting specimens from the South Sea Islands, and from the Esquimaux of Hudson's Bay. With these have been deposited the two valuable Mummies, and other relics of Egyptian art.

Your Council also inform your Society, that, at their request, one of your Secretaries* has drawn up an account of the Mummy presented

* Mr. Wm. Osburn, jun.

by Mr. Blayds, with a statement of the important discoveries he has made relating to its history. This report they have directed to be printed at the expense, and published under the sanction of the Society.

Your Council would also call your attention to the very beautiful illustrations of this little work, from the pencil and graver of Mr. Henry Denny.

In concluding this short account of the state of your Museum, your Council would urge upon their fellow Members, the necessity of increased exertion, to fill the ample space provided by the liberality of the Proprietary Members; and, at the same time, would stimulate to a generous rivalry with the sister Institutions, which so pre-eminently adorn this county.

Nor has the Eighth Session yielded to any former one in the value of the scientific and literary communications. Your Council announce with pleasure, the uninterrupted series of papers which have occupied your meetings, though they regret that much of the intellect of the Society still remains unexerted.

The papers read during the Session have been :—

- 1 On the Imperfections of Language—by the Rev. W. H. Bathurst, A.M. the President—(read Nov. 2d, 1827.)
- 2 On the Balance of the Numbers and Food of Animated Beings—by Michael Thomas Sadler, Esq. Vice-President —(read Nov. 16th, 1827.)
- 3 On Sensation in Animals—by Mr. John Phillips, F.G.S. Hon. Mem. Y. P. S. and Leeds P. and L. S.—(read Dec. 7th, 1827.)
- 4 On Gypsies—by Mr. John Atkinson, Jun.—(read Dec. 21st, 1827.)
- 5 On the History and Uses of Telegraphs—by Mr. Edward Baines, Jun.—(read Jan. 4th, 1828.)
- 6 On the Moral Influence of History—by the Rev. G. S. Wiedemann—(read Jan. 18th, 1828.)
- 7 On the Origin of Poetry—by Mr. Donald M'Farlane—(read Feb. 1st, 1828.)
- 8 On the Eastern Origin of Mankind and their Primary Dispersion over the Earth—communicated by Mr. R. Fawcett, of Cambridge—(read February 15th, 1828.)

- 9 On the Progress of Painting, from the Death of Charles the First to the close of the Reign of George the Second—by Francis Thomas Billam, Esq. Secretary to the Northern Society—(read March 7th, 1828.)
- 10 On the Advantages to be derived from Mathematical and Philosophical Knowledge—by Mr. John Darby—(read March 21st, 1828.)
- 11 A Communication was read from Mr. S. Woodward, describing the Situation in which some Fossil Elephant's Teeth, presented by him to the Society, had been discovered. After which, a paper "On Apparitions"—by Mr. William Hey, Jun.—(read April 11th, 1828.)
- 12 On the Colour of the Sky, and the Relation subsisting between Solar Light, and the Light of Combustion—communicated by John Dalton, Esq. F.R.S. of Manchester—(read April 18th, 1828.)
- 13 On Coincidences—by F. T. Billam, Esq.—(read May 2d, 1828.)
- 14 On the Poetry of Goldsmith—by M. T. Sadler, Esq.—(read May 16th, 1828.)

In conformity with one of the fundamental laws of your Society, that your Council should engage Lecturers of eminence, they, early in the Session, made application to William Carey,

Esq. whose name as an enthusiastic admirer and promoter of art, was known to most of you, and whose paper read during the last Session, had impressed your Council with a high opinion of his talents as a public Lecturer. Mr. Carey immediately accepted the proposal, and in the month of November, delivered a Course of Lectures on "The Fine Arts," which were characterised by an extensive reading, and an intimate acquaintance with art in all its details. Besides this course, which was completed in December, two Courses, the first of four Lectures on the "Laws of Chemical Combination and Analysis," by Mr. E. S. George; and six on "The Philosophy of the Intellectual Emotions, and of their corresponding expressions, applied to the examination of Modern Materialism," by the Rev. R. W. Hamilton, were delivered in February and March.

On these Lectures, delivered by Members of their own body, your Council offer no remarks; except, that the numerous attendance upon the latter Course, fully evinced the estimation in which they were held, as well by the Society as the town at large. Besides these, a Course of four Lectures "On the Organs of Sensation," forming the sequel of a series of demonstrations

given at the Leeds Infirmary, were delivered by Dr. Williamson and Mr. Hey, to numerous audiences.

Amongst the donations to the Museum, your Council would notice the valuable present of a stuffed specimen of the Wild Boar, from Mr. Thomas Robinson, a gentleman to whom the Society has on former occasions been highly indebted ;—a collection of seventy interesting Minerals, from Cornwall, by Mr. Watson ;—a number of skins of Birds and Quadrupeds, from Sumatra and the Indian Archipelago, presented by — Craufurd, Esq. through Mr. Edward Baines, jun.—A large number of very rare Insects, many of them apparently undescribed, have been received from Mr. Heycock. These specimens were all procured in the sorting of foreign wool ; the insects were found in a fine state and preservation, entangled in the fleeces. The fact is worthy of attention, as shewing that every Member may, with a little labour, aid in some degree the collection of the Society.—They would also acknowledge some fine skins of Birds from Brazil, from Mr. J. W. Moore ; the fine collection of skins of Birds purchased by Mr. E. S. George, with the proceeds of four Lectures ; and many other specimens

in the various departments of Natural History, presented by your own Members, and by strangers.

The Library has also received several accessions. Early in the Session, a valuable present of Books was received from Mr. West, of Leeds, and Mr. Arthur West, of London; and the thanks of the Society are due to those Societies that have honoured them by the transmission of their Reports.

The funds of the Society have been benefited by the liberal donation of the produce of six Lectures, made by the Rev. R. W. Hamilton.

Your Council, in reporting the flourishing state of your Society, have pleasure in witnessing the progress of science in neighbouring Institutions. The honour of being the foremost belongs to you. In the short time, since your formation, Literary and Scientific Institutions have arisen, in almost every large town of the county. Their objects are various, as their situations; some paying a more exclusive attention, to the cultivation of the numerous interesting departments of Natural History, whilst others render an equal homage to Literature and more diversified science.

They would rejoice in the illustrious patronage conferred upon science, by the grant of St. Mary's Abbey, made by the Crown to the Yorkshire Philosophical Society; a Society, which, by its well directed and unwearied exertions, merits the thanks of all interested in the increase and extension of knowledge.

In conclusion, your Council would warn you not to be satisfied with what has already been achieved. They would stimulate you to renewed efforts, and then each succeeding Report will be the record of increased prosperity.

TREASURER'S STATEMENT.

Leeds Philosophical and Literary Society, at the Close of the Eighth Session.

PROPRIETARY FUND.

Disbursements.		Receipts.	
	£. s. d.		£. s. d.
To Shuttleworth.....	100 0 0	By Balance	192 1 10
— Pullan and Andrews.....	14 18 0	— Interest.....	1 14 0
— Kendell and Co.....	50 0 0	— Balance	65 10 2
— Henry Liversay	89 12 0		
— Error transferred to Ordinary Account	4 16 0		

To Balance due to Treasurer..... 2596.0
65 10 2

ORDINARY FUND.

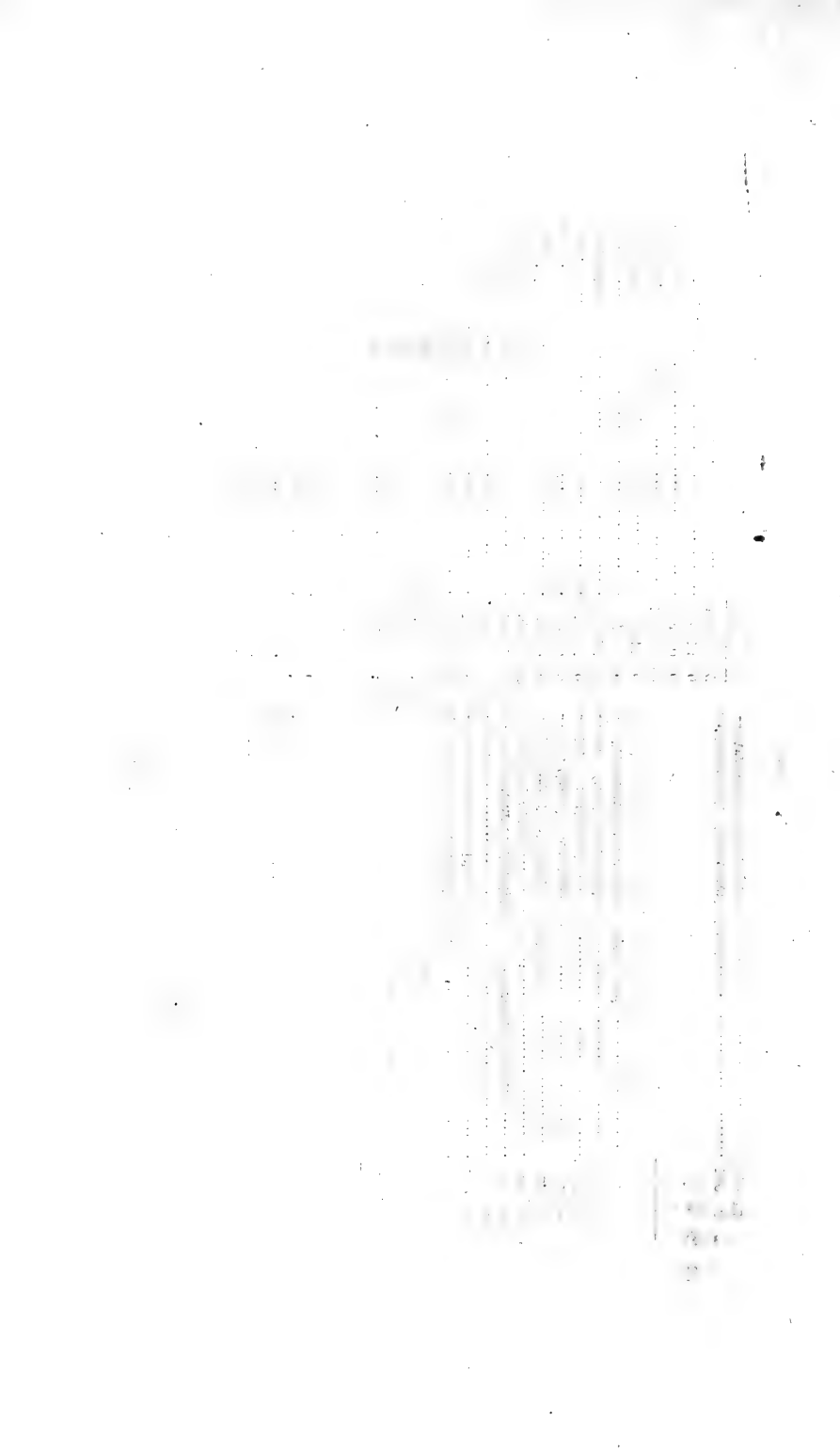
Disbursements.		Receipts.	
	£. s. d.		£. s. d.
To Deficiency in Mineral Subscription.....	6 10 6	By Balance in Treasurer's Hands.....	50 7 3
— Sundry Expenses.....	18 12 0	— Subscriptions, 189 Members.....	270 15 0
— Mr. Henry Denny	100 0 0	— Fines	52 4 0
— Printing and Advertising.....	30 17 3	— Deposits and Subscriptions of Thirteen Members.....	68 5 0
— Books and Stationery.....	39 10 6	— Rent of Cellars.....	45 0 0
— Mr. Carey, (Course of Lectures).....	52 10 0	— Arrears of Subscriptions and Fines.....	20 14 0
— Oil Gas.....	50 0 6	— Mr. Carey's Lectures.....	4 19 0
— Insurance.....	11 15 0	— Mr. E. S. George's.....	4 14 0
— Tradesmen's Bills.....	26 16 11	— Rev. R. W. Hamilton's.....	28 11 0
— Taxes.....	7 6 6	— Transferred from Proprietary Fund.....	4 16 0
— Purchase and Carriage of Specimens.....	13 15 6		
— J. Kendell and Co. for Cases.....	117 14 0		
— Coals	4 0 0		
— Interest.....	0 14 0		
— Balance	100 5 7		

To Balance in Treasurer's hands..... 100 5 7
— Arrears of Subscriptions..... 40 12 0

226.0

5008.3

255.60



DONATIONS

TO

THE SOCIETY'S MUSEUM.

*Those marked thus * are Members of the Society.*

GEOLOGY AND MINERALOGY.

August, 1828.

- | | |
|--|------------------------------------|
| 5 Geological Specimens | * Mr. R. D. Chantrell. |
| Alcyonite in Flint | } Mr. Samuel Woodward,
Norwich. |
| Fossil Wood, from Palling (Norfolk) | |
| 3 Echini in Flint, and 8 Shells in Ditto | |

September 6th.

- | | |
|--|------------------------------------|
| 36 Specimens of Minerals from the State
of Maryland (U. S.) including Chry-
socola, Chromates of Iron, Anthracite,
Sub sulphate of Alumine, Sulphate of
Magnesia, &c. | } Mr. Olive Simms, Balti-
more. |
|--|------------------------------------|

November 10th, 1827.

- | | |
|--|---|
| A fine Trilobite and several Specimens of
Corallines, from Dudley | } Mr. Samuel George, West
Broomwich. |
| Splendid Specimens of Peacock Coal from
Barnsley | } Leeds Oil Gas Light Com-
pany. |

December 1st, 1827.

Very interesting piece of Amber, containing 7 Specimens of a rare British Insect (*Platypus Cylindricus*), and 3 Specimens of *Tomicus Villosus* } Mr. Bowling, Chapeltown.

December 10th, 1827.

Fossil Plant..... } Messrs. Walsh and Dunbar, Leeds.

Specimen of the Pumice Stone which fell at Pompeii, A. D. 79 }
 Plaster from the Walls of the Baths of Titus at Rome. } Wm. Warnsey, Esq. London;
 Ashes of the Eruption of Vesuvius, 24th } by Mr. Thomas Prince,
 October, 1822 } Leeds.

Specimens from the Falls of Terni, in Italy }
 70 Specimens of Minerals from Cornwall, including Iron Pyrites, Yellow Copper Ore, Peacock Copper, Bournonite, fine Crystals of Calc Spar, Satin Spar, Malachite, &c..... } * Mr. Wm. Watson, Leeds.

January 18th, 1828.

Astragalus of the Elephant, from the Coast of Happisborough, Norfolk .. } Mr. S. Woodward, Norwich.

January 29th.

An exceedingly fine Specimen of Fossil Plant, six feet long. *Lepidodendron* } Mr. Rinder, Headingley.

3 Specimens of *Ammonites læviusculus* .. }
 8 fine Specimens of Fossil Shells from Wurtemberg } Messrs. Sowerby's, London.

15 Specimens of Carbonate of Lime, from the River Don } Master William Aldam.

February 10th.

Remains of the *Ichthiosaurus*, from Whitby } Purchased by the Society.

March 13th.

5 Specimens of Gypsum Mr. C. Blanchard.

May 15th.

Specimen of Basaltic Coal, from the }
Giants Causeway, Ireland..... } • Rev. R. W. Hamilton.

ZOOLOGY AND ORNITHOLOGY.

July, 1827.

Hirundo Apus (Swift)..... • Mr. John Smallpage.
Pair of Pavo Cristatus (Peacock)..... • T. B. Pease, Esq.

October, 1827.

A fine stuffed specimen of the Wild Boar, }
(Sus Scrofa) from the South of Prussia } Mr. Thomas Robinson.
Indian or Green Winged Dove..... } John Smith, Esq. Bowcliffe,
Great Crowned Pidgeon, and Woodpecker } by • F. T. Billam, Esq.

November, 1827.

Mustela Putorius • Rev. W. H. Bathurst.

December, 1827.

Pair of Lepus Cuniculus (Spanish Var).. • Mr. Samuel Smith.
Pair of Cavia Cobaia Mr. H. Denny.
Simia Sinica (Chinese Bonnet Monkey).. Purchased by the Society.
Tusks of Sus Babyroussa..... • Mr. W. M. Stears.

January, 1828.

Sylvia Lucina (Nightingale)..... • John Cawood, Esq.
Didelphis Pygmæa
Felis }
Sciurus } J. Craufurd, Esq. F.R.S.
Viverra..... } Liverpool; by • Mr.
Didephis } Edward Baines, Jun.
25 Skins of Birds from Singapore and
Bengal

February, 1828.

Phasianus Colchicus (Pheasant)	} * George Banks, Esq.
Lepus Timidus (Hare)	
Falco Lagopus (Rough Legged Falcon)..	} Purchased by the Society.
— Cyaneus (Hen Harrier).....	
Corvus Corax (Raven).....	
Columba Palumba (Ring Dove)	
Anas Acuta, male and female, (Pintail Duck)	
— Nigra, male and female, (Scoter Duck)	

April, 1828.

Alcedo Ispida (King Fisher).....	Mrs. Barton, Leeds.
A living specimen of the Crested Cardinal (Loxia Cardinalis)	} Mr. James Dickinson, Burley.
A living specimen of Ramphastos Dico- loris, Red Breasted Toucan, from Rio Janeiro	
Pair of Numida Meleagris (Pintado)	Purchased by the Society.
Pair of Pavo Cristatus (Peacock).....	Mr. H. Denny.

May 6th.

10 Birds from Brazil, including King Fisher, Green Heron, pair of Tanagers, Grebe, Manakin, Scarlet Breasted Chatterer, &c.....	} * J. W. Moore, Esq. Brazi- lian Vice-Consul, Leeds.

May 12th.

Alca Torda (Razorbill)	} * George Walker, Esq. Kil- lingbeck.
— Artica (Puffin)	
Larus Rissa (Kittiwake)	} * Mr. John Heaton.
Larus Canus (young of).....	

May 28th.

Ceylon Leopard

African Jacana and Buffle-headed Duck,

Mexican Jay, Bishop Tanager, four winged Cuckoo, Blue bellied Paroquet,

African Heron, Eider Duck, male and female Merganser, Pintail Duck,

Shoveller Duck, Night Heron, pair of Capercailes, Umbellated Grouse,

American Bittern, long tailed Duck, male and female, Herring Gull, Bra-

zilian Jay, Purple Grackle, pair of Red shouldered Orioles, Gallinule, Cayenne

Night Heron, forked tailed Fly-catcher, American Goat-sucker, Shrike, Moor

Harrier, Hawk-headed Owl, Buff-crested Woodpecker, Buff-backed do.

Red-headed do. Little Egret, Coromandel Heron, Green Heron, pair of

Little White Heron, Rare Heron, from Calcutta, Yellow-throated Tou-

can, Red-billed Toucan, Mountain Toutan, Lesser Glossy Thrush, Ame-

rican Stare, British Bee-Eater, Black-capped Lory, British Nutcracker,

Black Cockatoo, American Woodcock, Pintado Petrel, Red-breasted Mer-

ganser, Plain tain Eater, Hoopoe, Hook billed Pigeon, Red-legged Crow, Pon-

dicherry Eagle, Mississippi Kite, Orange-breasted Falcon, Red-tailed

Falcon, Scarlet and Blue Macaw, pair of Tropic Birds, Mitred Paro-

quet, Blue-fronted Paroquet, Green Paroquet, Crown Crane, Pennantian

Lory, male and female, a Fenck, Warbler, Coachwhip Meliphaga, 3

other Species of Meliphaga, and a pair of Dundivers.

• Mr. E. S. George, F.L.S.

Sec. being purchased with the produce of a Course of Lectures, delivered by him to the Society.

HERPETOLOGY, OPHIOLOGY, AND ICHTHYOLOGY.

November, 1827.

Crocodylus Lucius (Alligator)	Purchased by the Society.
Coluber Natrix and its Exuviae	• Mr. William Trant.

January, 1828.

Milk Snake, from America	} • Mr. William Heycock.
Fish	
Testudo Greca	

February, 1828.

Anarchisis Lupus (Wolf Fish).....	Purchased by the Society.
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March, 1828.

Fish	Mr. Edward Read.
Horn of Monodon Monoceros (Sea Unicorn).....	} John Clapham, Esq.
.....	

ENTOMOLOGY AND CRUSTACEAEOLOGY.

August, 1827.

A Collection of British Insects, including	} Joseph Sparshall, Esq. F.L.S. Norwich.
Anthrax Syphax, Bombylius dilutus,	
Bombylius fimbriatus, Notoxus	
Monoceros, Onthophilus Striatus,	
Sydmænus Hirticollis, &c.	

September, 1827.

Pair of Saturnia Pavonia (Emperor Moth)	Mr. H. Baines, York.
Several British Insects, including	} Mr. H. Denny.
Carabus glabratus, Brachinus crepitans,	
Osmylus maculatus, Cerambyx moschatus,	
Sphinx ligustri, Papilio, machaon, &c.	
.....	

October, 1827.

Specimens of <i>Typhæus Vulgaris</i> , Meloe	}	Mr. John Phillips, F.G.S. Hon. Mem. Leeds; P. and L.S. York.
Proscarabæus, Elater Cupreus.....		
Elater Pectinicornis		
Hipparchia Galathea.....		
Argynnus Paphia		
Thecla Quercus	}	Purchased by the Society.
Melitæa Artemis		
Carabus Arvensis		
Necrodes Littoralis		
Urocerus Juvencus		
Stratiomus Chamælion	}	Mr. G. R. Denny, Norwich.
200 Norfolk Insects, including many species of Nirmi, not before in the Society's Collection		

January, 1828.

A number of Spanish Insects	}	Mr. William Heycock.
Specimen <i>Æga Emarginata</i>		Rev. S. Sharp, Hon. Mem. Leeds Phil. and Lit. Society.
Uncommonly large specimen of Cancer Pagurus		• Mr. George Hirst.

NUMISMATOLOGY.

July, 1827.

Four Silver Coins of Edward	• R. C. Battye, Esq.
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December 21st, 1827.

7 Silver Coins, consisting of a 5 Franc piece of Louis XVIII. ; 50 Cent. 25 Cent. and 18 Cent. pieces of the United States of America ; ¼, 8th, and 16th of a Spanish Dollar	}	• Mr. W. Smith Dickinson.

February 8th.

Gold Coin of James 1st.....	Miss Caroline Oates, Burley.
Silver Coin of James 2nd	Mrs. Barton, Leeds.

MISCELLANEOUS.

July, 1827.

Cingalese Manuscript.....	▪ Joshua Dixon, Esq.
Wasps Nest, from Buenos Ayres	▪ Mr. W. M. Stears.
Cast of a New Zealander's Head.....	▪ Mr. Robert Taylor.

December 17th, 1827.

Salmon Net, from Hudson's Bay, manu- factured from the Bark of the Birch Tree	} • Mr. Richard Hey.
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March, 1828.

Table of Chemical Equivalents	{ Dr. Wilkinson, Bath, the Author.
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May, 1828.

Model of a Mandioca Mill, from Brazil, } manufactured by the natives	• J. W. Moore, Esq. Bra- lian Vice-Consul.
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DONATIONS TO THE LIBRARY.

A Grammar of the Pali Language	{ Rev. Benjamin Clough, of Colombo, the Author.
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August, 1827.

Third and Fourth Reports of the Bristol Institution	{ Bristol Literary and Phil. Institution.
Report of the Bath Literary and Philo- sophical Society	{ Bath Lit. and Phil. Society.

September, 1827.

- Pultney's Life of Linnæus, by Maton, 4to. } • Mr. Charles Sykes.
- New System of Chemical Philosophy. Vol. 2, part 1 } John Dalton, Esq. F.R.S.
Hon. Mem. L.P.L.S.
the Author.

October, 1827.

- Thermometrical Observations at Leith Fort, 4to. } • David Brewster, F.R.S.
LL.D. the Author. Hon.
Mem. L.P.L.S.

November,

- An Introductory Address, delivered to the Members of the Wakefield Lit. and Philosophical Society } Wakefield Lit. and Phil. Soc.
- An Essay on Systems and Methods in Natural History } J. E. Bicheno, Esq. F.R.S.
Sec. L.S. the Author.
- An Address to the Zoological Club of the Linnæan Society } J. E. Bicheno, Esq. the
Author.
- A Treatise on Universal Jurisprudence.. } John Penford Thomas, Esq.
F.R.S.Lit. the Author.
- "Prints of Medals From the Cabinet of Louis XIV. folio }
- of Medals struck by Louis XV... }
- "Dr. Hookes' Microscopic Observations, folio }
- "Memoirs of Science and Arts, 2 vols. 4to. }
- "Plans of Towns in Flanders }
- "Liebknecht de Diluvio. Universali }
- "Surtzers Hydrostatics, 2 vols }
- Correspondence of Leibnitz and Bernouilli }
- "Albert Haller de Allii Genere Naturalli }
- "Don Saltero's Catalogue..... }
- "Hoadley's and Wilson's Electrical Experiments..... }
- Observations on Alphabetic Writing }
- Mr. Wm West, Leeds;
and Mr. Arthur West,
London.

December 21st, 1827.

A Key to Bland's Algebraical Problems.. { * Mr. John Darby, the
Author.

April 15th, 1828.

Annual Report of the Yorkshire Philo- } Yorkshire Phil. Society.
sophical Society
Engraving of Salmo Lewensis { Wm. Smithson, Esq. Hon.
Mem. L.P. and L.S.
Two Coloured Drawings of Hieroglyphics { Presented by the Committee.
from a Mummy Case..... { of the Norwich Museum

BOOKS PURCHASED.

- Manchester Transactions.
* Audubons Birds of America.
* Philosophical Transactions.
* Zoological Journal.
* Curtis' Entomology.
* Sowerby's Mineral Conchology.
* Transactions of the Royal Society of Literature
* Cuvier's Fossil Osteology.
* Annals of Philosophy and Philosophical Magazine.
* The Quarterly Journal of Science and the Arts.
* Brewster's Journal.
* Edinburgh Philosophical Journal.
Ireland—its Evils and their Remedies.
Martins's Derbyshire Fossils.

*Those marked thus * are in continuation.*

DONATION TO THE FUNDS OF THE SOCIETY.

£22.—by the Rev. R. W. Hamilton, being the produce of a Course
of Lectures delivered by him to the Society.

LIST

OF

OFFICERS AND COUNCIL.

OFFICERS.

President.....	Michael Thomas Sadler.
Vice-Presidents	{ Dr. Williamson.
	{ F. T. Billam.
Treasurer	William Williams Brown.
Secretaries	{ Wm. Osburn, Jun. F.R.S. Lit.
	{ E. S. George, F.L.S.
Curator and Librarian	John Atkinson, F.L.S.
Sub-Curator	Henry Denny.

COUNCIL.

Wm. Hey.	Wm. Hey, Jun.
Rev. R. W. Hamilton.	Joshua Dixon.
Rev. W. H. Bathurst.	James Entwisle.
John Atkinson, Jun.	Thomas Motley.
John Marshall, M.P.	William Gott.
T. P. Teale.	T. H. Marshall.

MEMBERS ELECTED. 1827-8.

Alexander Taylor, M.D.	H. C. Turkington.
John Darby.	James Richardson.
John Leather.	Richard Temple.
Donald M'Farlane.	Matthew Gaunt.
Richard Hey.	Joseph Henry Dickinson.
Hugh Ford Bacon.	John Hebden.
Rev. W. Dodsworth.	William Gilpin.
Thomas Luccock.	Robert Cass.
I. P. Sanderson.	G. K. Hirst.
Peter Wood.	

1871

THE LANCET

ROBINSON AND HERNAMAN, PRINTERS, LEEDS.

NINTH REPORT

OF THE

COUNCIL

OF THE

Leeds Philosophical and Literary Society,

AT THE

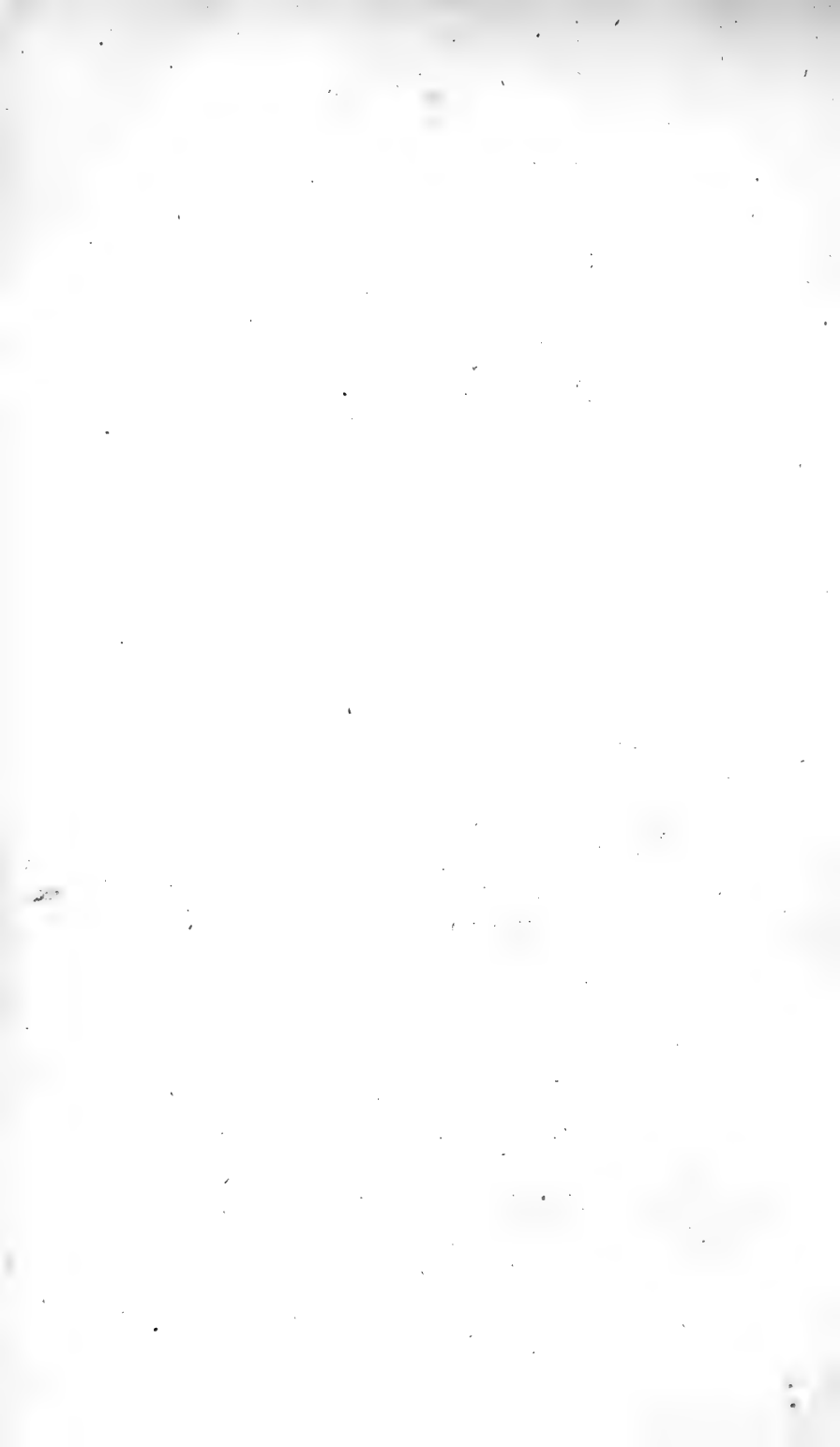
CLOSE OF THE SESSION

1828-29.

LEEDS:

PRINTED BY EDWARD BAINES AND SON.

1830.



REPORT OF THE COUNCIL

AT THE

CLOSE OF THE NINTH SESSION.

IN presenting the Annual Report with which the duties of the present Council terminate, it gives them pleasure to state that the Society has prospered during the Session.

The Literary and Scientific transactions have obtained a considerable share of public attention, and have in every respect equalled those of former Sessions. Nay, the Council would indulge the hope, that those symptoms of improvement to which we always looked forward, and which the Society has so great a right to expect, have already begun to manifest themselves.

They of course feel the difficulty which must ever attend any observations touching matters so closely bordering upon personality. They are,

nevertheless, constrained, while upon this subject, to congratulate the Society upon the circumstance, that already has more than one publication, which now ranks deservedly high among the literary productions of the country, entirely originated in Essays delivered in this Hall; and that the Philosophical and Literary Society of Leeds has attained a station in public opinion amongst the institutions of England far higher and more honourable than the most ardent hopes of its founders could possibly have anticipated.

The following have been the subjects of the Papers which have occupied the General Meetings of the Session :—

1. On the Progress of Ancient Civilization—by M. T. Sadler, Esq. the President—(read Oct. 24th, 1828.)
2. On the Geology of Yorkshire—by Mr. E. S. George—(read Nov. 7th, 1828.)
3. On the Character and Condition of Women in various Ages and Countries—by Francis Thomas Billam, Esq. Vice-President—(read Nov. 21, 1828.)
4. On the Physical Modes of Matter—by Alexander Taylor, Esq. M.D.—(read Dec. 5th, 1828.)
5. On Omens—by Richard Atkinson, Esq.—(read Dec. 19th, 1828.)

6. On the origin of Merchants' Marks—communicated by Mr. S. Woodward, of Norwich.

On the System of Numerical Notation, and on the Calendar of the ancient Egyptians—by Mr. Wm. Osburn, Jun., Secretary.—(read January 2nd, 1829.)

7. On the uses and abuses of Hypotheses in Science—by James Williamson, Esq., M.D., Vice-President—(read January 14th, 1829.)

8. On the Origin of Gothic Architecture—by Mr. John Sangster—(read February 4th, 1829.)

9. On Meteors and Meteoric Stones—by Mr. Joshua Dixon—(read February 18th, 1829.)

10. On the Metamorphoses of Insects—by Mr. H. Denny—(read March 6th, 1829.)

11. On Armorial Bearings—by Mr. John Wilkinson—(read March 20th, 1829.)

12. A Discussion upon Civilization—(April 3d, 1829.)

13. On the Origin of Written Characters—by Mr. William Osburn, Jun. Secretary—(read April 24th, 1829.)

It will be noticed that one evening during the Session was entirely devoted to discussion. The Council rejoice to report the entire success of this experiment, and anticipate both pleasure and advantage from this occasional change in the business of the General Meetings.

The discussions after the Papers also have been often animated and interesting.

Two Courses of Lectures have been delivered to the Society during the Session : the one a highly interesting one upon the comparative Anatomy of the Cerebral and Nervous Systems, by Mr. T. P. Teale ; the other upon Hieroglyphics, by Mr. Wm. Osburn, Jun. The attendance upon neither, however, was such as to justify either the Council in the pecuniary expenditure needful for a Course of Lectures, or the Members in the much more formidable expenditure of time and labour requisite in preparing one.

The following are amongst the most important additions which have been made to the Museum in the course of the past year :—

1. A very large specimen of the Aerolith or Meteoric Stone, which fell April 26th, 1803, at Aigle, in the department of Orne—by Benj. Gott, Esq.
2. Fine specimen of the Palm Madrepore, (*Madrepora Palmata*) —by Wm. Brown, Esq. Newfoundland.
3. Specimen of the Duck-billed Platypus, (*Ornithorhynchus paradoxus*)—by Mr. John Thorp.
4. Fine specimens of Minerals—by Thomas Allen, Esq. Sec. R.S.E. Edinburgh.

5. A Seal, (*Phoca vitulina*)—Mr. Thomas Robinson.
61. Minerals from America—Thos. Meade, Esq. ; to whom the Society has been frequently indebted on former occasions.
7. A similar acknowledgment is due to Mr. Samuel Woodward, of Norwich, who has again presented some fossils from the Norfolk Crag.
8. The Royal Society of Edinburgh have presented to the Library a complete series of their transactions.
9. Illustrations of the Geology of Yorkshire—by Mr. Phillips.
The extraordinary merits of this Publication have already obtained for it some portion of the notice it deserves, both from the critics of this country and of the Continent. It is a complete text book of the subject upon which it treats. The Council refer with pleasure to the Plates which embellish this work, from the Lithographic Press of Mr. Inchbold.
10. The Society has been honoured by the presentation of two works from Joshua Brookes, Esq. F.R.S. L.S. &c,
11. A White Bear, (*Ursus Maritimus*) presented by some members of the Council.

Besides these, the following have been added by purchase to the Museum :—

The valuable collection of Insects of your late lamented curator, Mr. Atkinson.

The arrangements alluded to in the last Report for fitting up the Museum with cases have been completed during the year, and nearly the whole of the Society's collection is now displayed; which in Mineralogy and Geology is already possessed of specimens every way worthy of the Institution. The same remark will apply to Insects, Crustacea, and Shells. The Museum has also to boast of many valuable specimens of Birds and Animals; though, in these two departments, the Council regret to have to report that many deficiencies still exist, and they cannot refrain from further remarking, that, at a period like the present, when these subjects obtain such universal attention, and when splendid cabinets of natural history both public and private abound everywhere, a stigma is cast by this defect upon the Society which it really does not deserve.

It will be seen by the cash account, that the present income is totally inadequate to supply this defect, and under these circumstances the Council feel themselves called upon to recommend to the Society the adoption of some specific measure for the purpose.

In making this statement, the Council wish it distinctly to be understood, that no blame what-

ever can attach on this account to the Officers of the Institution to whom the Museum is entrusted; on the contrary, the most cursory inspection will convince any one that the highest praise is due to Mr. George, the Curator, for the advantageous and judicious arrangement which has been adopted.

While upon this subject, the Council cannot withhold the renewed expression of their gratitude to the memory of Mr. Atkinson, the founder of the Museum, whose decease, during the past Session, forms a melancholy epoch in the history of the Society.

As has been already hinted, the income of the Society is more than expended. A balance of £15 11s. 2d. is now due to the Treasurer, and some obligations remain yet undischarged. On the proprietary account a balance of £178 1s. 8d. is also due to the Treasurer. It should, however, be stated, on the other side, that several of the annual subscriptions are yet unpaid. The cellars also under the Hall still remain untenanted,—a circumstance which further diminishes the income of the Society.

Nine new ordinary Members have been elected during the year, and three honorary ones, amongst whom the Council have pleasure in announcing the name of Monsieur Champollion le Jeune, of Paris, who had previously signified to the Secretaries his willingness to accept it, and of Luke Howard, Esq., F.R.S.

The Council cannot conclude their annual Report better than by repeating the caution of their predecessors, that it is only by the individual exertions of its Members, that the Leeds Philosophical and Literary Society can be preserved in the respectable rank and station to which it has already attained. It is true, that by its constitution it presents few facilities for the attainment of the elements of Literary and Scientific Knowledge, yet it may not be altogether useless to remark, that in these, and these alone, however uninviting they may seem to be, are contained the germs of those fair flowers and sweet fruits, the contribution of which this Society asks of its Members. Let, then, each in the spirit of patience and perseverance, by which alone the higher attainments in Science and Literature can be mastered, vigorously set himself to those pursuits to which his taste or his circumstances may have directed him, in order to lay before the Society the result of his researches ;

and then, stimulated by each other's example to greater and yet greater efforts, the annual Reports of the Council will not consist merely of the melancholy retrospect of past prosperities, as has by some been anticipated, but the Society's present achievements will be forgotten in the brighter successes of future years.

LEEDS PHILOSOPHICAL & LITERARY SOCIETY, AT THE CLOSE OF THE NINTH SESSION.

DISBURSEMENTS.		£.	s.	d.
To Messrs. Kendell and Co. for Cases for Museum		100	0	0
Mr. H. Denny		100	0	0
Tradesmen's Bills		73	4	0½
Books and Stationery.....		47	10	0
Printing and Advertising		50	3	0
Insurance		11	15	0
Purchase and Carriage of Specimens		52	14	7
Oil Gas		12	14	0
Taxes		8	6	7
Coals		6	8	0
Dr. Williamson and Mr. Hey, for Lectures on account of the Infirmary.....		10	0	0
Sundry Expenses.....		26	1	0½
Banker's Commission.....		1	2	2
Cash in the hand of the Sub-Curator		3	16	3
		<u>£503</u>	<u>14</u>	<u>8</u>

£488 3 6

DONATIONS
TO
THE SOCIETY'S MUSEUM.

GEOLOGY AND MINERALOGY.

June, 1828.

Very fine Crystal of Sulphate of Barytes, }
from Westmorland..... } Mr. T. P. Teale.

13 Specimens of Minerals, from the Giant's }
Causeway, Ireland..... } Rev. R. W. Hamilton.

September.

40 Rock Specimens, from Westmórland }
and Cumberland..... } Mr. T. W. George.

August.

61 Specimens of North American Minerals, Thos. Meade, Esq.

5 Specimens of Lead Ore, from the Odin- }
lead Mine, Castleton..... } Mr. Wm. Aldam, Jun.

12 Specimens of Sulphate of Strontian, }
Lead Ore, Carbonate of Lime, &c. } Mr. Sparke George.
from Pateley-Bridge

November.

11 Splendid Minerological Specimens, viz :

Heulandite, Dumbartonshire.....
 Tourmaline, Kaeribucka, Sweden.....
 Chromate of Iron, Styria.....
 Ditto Ditto, Shetland
 Calcspar, Kirkaldy
 2 Specimens of Prehnite, Corstorphine
 Hill, Edinburgh
 Steatite, Kirkaldy
 Thomsonite, Dumbartonshire
 Harmotome, Dumbarton
 Vegetable Remains, Elbogen, near Carls-
 bad, Bohemia

Thomas Allen, Esq.
 Sec. R. S. E.
 By Benjamin Gott, Esq.

A very fine Meteoric Stone or Aerolith,
 weighing 1 pound 7 ounces, which fell
 at Aigle, in the department of Orne,
 on the 26th April, 1803.....

Benjamin Gott, Esq.

Briarean Encrinite, from Whitby.....
 (Pentacrinus Briareus)

Rev. R. W. Hamilton.

Specimen of Rock Salt, from Northwich...

Mr. John Smallpage.

December.

Specimens of Mactrea Magna, Natica
 glaucinoides, Mactrea arcuata, Tellina
 prætenuis, Murex Lapilliforme, Buc-
 cinum tenerum, Turritella conoidea,
 Pecten sulcatus, Cardium edule, from
 the Crag Deposit at Brammerton,
 Norfolk

Mr. Samuel Woodward.

Specimen of Calamites, from Harehills.....

Mr. Warham.

Specimens of Calamites, from Batley.....

Mr. Benjamin Jackson.

February, 1829.

- 2 Specimens of Plumbago, from Borrowdale Rev. J. P. Malleson.
- Interesting Specimen of Cannel Coal..... Leeds Coal Gas Company.
- Specimen of Iron Ore..... F. T. Billam, Esq.

ZOOLOGY.

September.

- Specimen of the Great Bat, (*Vespertilio*) }
 Noctula) } Mr. Joseph Broadhead.

October.

- An exceedingly fine Specimen of the Polar
 Bear, (*Ursus Maritimus*)..... }
 } Purchased by Subscription,
 } and presented by the fol-
 } lowing Members of the
 } Society :—
 } S. G. Fenton,
 } T. W. George,
 } E. S. George,
 } M. T. Sadler,
 } James Richardson,
 } Jno. Atkinson, Jun.
 } T. P. Teale,
 } William Gott,
 } Joshua Dixon,
 } William Osburn, Jun.
 } William Hey, Jun.

November.

- Specimen of the Hare, (*Lepus Timidus*)... Mr. Joseph Broadhead.

December.

- Specimen of the Dog Seal, *Phoca Vitulina*... Mr. Thomas Robinson.
- Specimen of — Monkey, (*Simia* —)... Mr. Benjamin Jackson.

January, 1829.

Specimen of the Duck-billed Platypus,
 (Onithorynchus Paradoxus) from New
 South Wales..... } Mr. John Thörp, Leeds.

February.

Specimen of the Stoat, (Mustela Erminea) }
 White Var } John Bischoff, Esq.

March.

Specimen of the Ferret, (Mustela furo)... Mr. Henry Newsam.

Specimen of the Weasel, (Mustela Vulgaris) Mr. John Hey.

Specimen of the Fox, (Canus Vulpes) fem.... Mr. Jno. Smallpage.

Specimen of the Otter, (Lutra Vulgaris) }
 young ... } Purchased by the Society.

Specimen of the Fox, (Canus Vulpes) male A Friend.

April.

Pair of the Great Bat, (Vespertilio Noctula) Mr. William Stephenson.

June.

Jay (Corvus Glandarius), Stare or Starling }
 (Sturnus Vulgaris), } Wm. Heycock, Esq.

Scarlet-Headed Woodpecker, from Deme- }
 rara } Charles Waterton, Esq.
 Walton-Hall.

September.

Short-Horned Owl, (Stix Brachyotus)..... Mr. Wm. Osburn, Secretary.

Hen Harrier, (male) (<i>Falco cyaneus</i>).....	}	Purchased by the Society.
Creeper (<i>Certhia familiaris</i>).....		
Crossbill, (<i>Loxia curvirostra</i>).....		
Pteroglossus _____ ..		
Pair of Blue Robins, (<i>Motacilla sialis</i>).....		
American Blue Jay, (<i>Corvus cristatus</i>).....	}	
Yellow rumped Flycatcher, (<i>Sylvia coronata</i>)		

October.

Long-Horned Owl, (<i>Strix Otus</i>).....	Mr. John Heaton.
Partridge, (<i>Perdix cinerea</i>)	Mr. Joseph Broadhead.
Black Grouse, male and female, (<i>Tetrao</i> <i>Tetrix</i>)	} Purchased by the Society.
Pair of Ptarmigan or White Grouse, (<i>Tetrao</i> <i>Lagopus</i>)	

Pair of Pintados, (*Numidia Meleagris*)..... Mr. Wm. Reader Cass.

November.

Pair of the Barbary Turtle Dove, (<i>Columba</i> <i>Risoria</i>).....	}	Mr. John Lapage.
Hooded or Royston Crow, <i>Corvus Cornix</i> ...		George Banks, Esq.
Sparrow Hawk, (<i>Falco Nisus</i>).....		Mr. Joseph Broadhead.
<i>December.</i>		
Rough-Legged Falcon, (<i>Falco Lagopus</i>)...	}	Mr. T. Butler, Dunnington.
Buzzard, (<i>Falco Buteo</i>).....		

January.

Very fine Specimen of the Waxed Chat- terer, (<i>Bombycilla Garrula</i>) shot in Leicestershire	}	Rev. Charles Heycock, Ouston, Leicestershire.
Turkey, (<i>Gallopavo Meleagris</i>).....	Purchased by the Society.	

January.

White fronted Goose, (*Anas Albifrons*)... Purchased by the Society.

Pair of Starlings, (*Sturnus Vulgaris*)..... Miss Emma Hirst.

Pair of the Common Gull, (*Larus Canus*)... George Banks, Esq.

Grey Phalarope, (*Phalaropus lobatus*)..... Mr. John Heaton.

Pair of Skylarks, (*Alauda Arvensis*) F. T. Billam, Esq.

Pair of Crossbills, (*Loxia Curvirostra*)..... Mr. Wm. Osburn, Sec.

Pair of Pochard Widgeons, (<i>Anas Ferina</i>)	} George Walker, Esq. Killingbeck Lodge.
Do. Do. Tufted Duck, (<i>Anas Fuligula</i>)	

Very fine male Specimen of the Waxed Chatterer, (<i>Bombicilla Garrula</i>), shot near Barwick-in-Elmet.....	} Rev. W. H. Bathurst, Barwick-in-Elmet.

Sparrow-Hawk, female, (<i>Falco Nisus</i>).....	} Purchased by the Society.
Yellow Bunting (<i>Emberiza citrinella</i>)....	
Green Grosbeak (<i>Loxia Chloris</i>)	
Green Headed Goosander (<i>Mergus Merganser</i>).....	

February.

Redbreast, (*Sylvia Rubecula*)..... Mr. Wm. Stephenson.

Pheasant, male, (*Phasianus Colchicus*)... Mr. C. H. Schwanfelder.

March.

Pair of the Yellow Bunting, (<i>Emberiza Citrinella</i>).....	} Mr. Henry Newsam.
Goosander, female, (<i>Mergus Merganser</i>)...	
Nightingale, (<i>Sylvia Luscinia</i>).....	

Great Black and White spotted Woodpecker, (<i>Picus Major</i>).....	} Mr. W. R. Cass.

April.

Common Snipe (<i>Scolopax Gallinago</i>)	}	Purchased by the Society.
Jack Snipe (<i>Scolopax Gallinula</i>)		
Common Heron, male and female (<i>Ardea</i>		
Cinerea)		

Little Owl (*Strix Passerina*) Mr. John Heaton.

Sparrow Hawk (<i>Falco Nisus</i>)	}	Mr. Wm. Osburn, Secretary.
Bullfinch, (<i>Loxia Pyrrhula</i>).....		
Red-Start (<i>Sylvia Phoenicurus</i>)		

Nightingale (*Sylvia Luscinia*) Mr. Wardil, Leeds.

Yellow Legged Gull (<i>Larus Fuscus</i>)	}	Purchased by the Society.
Pair of the Jay (<i>Corvus Glandarius</i>)		

Coluber Natrix (Ringed Snake) Mr. Wm. Trant.

Arca —..... Wm. Brown, Esq.

January, 1829.

A Collection of Shells, consisting of the following Genera not before in the Society's Museum :—

Galeolaria.....	}	Mr. E. S. George, F.L.S. Curator.
Coronula		
Glycimeris		
Erycina		
Pandora		
Tellinides.....		
Corbis		
Capsa		
Cardita.....		
Isocardia		
Chama		
Perna		
Lima		
Plicatula		
Vulsella		
Parmophorus		
Vermetus		

Three South American Insects :

Passalus Interruptus	} Charles Waterton, Esq. Walton Hall.
Fulgora Lanternaria	
Calandria Palmarum	

Pair of <i>Lycæna Dispar</i> (Scarce Copper Butterfly).....	} Purchased by the Society.
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September.

Chrysomela Pallada, Tarus Basalis	} Purchased by the Society.
Trechus Fulvus, Odontonyx Rotundatus	
Pterostichus Otopunctatus	
Peryphus Viridiæneus, Helobia Ethiops...	
Helobia Marshallana, Leistus Rufescens ..	
Tachypus Striatus, et Suturalis.....	
Stenus Kirbii, Notonecta Furcata	
Elater Riparius, & 4 Pustulatus	
Saperda Populnea, Colybetes Fontinalis ...	}
Anomala Frischii	

A number of British Insects, including Nebria Livida, Leptura, 4 Maculata, Smerinthus Ocellata, &c.	} Mr. H. Baines, York.
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Several British Insects, including Carabus Nitens, &c. &c.	} Mr. John Phillips, York.
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Peltastes Pini, Hipparchia Davus	} Mr. H. Denny.
Saturnia Pavonia, Anchomenus Oblongus ..	
Acilius Caliginosus	

A Specimen of <i>Acrida Viridissima</i> taken on the field of Waterloo	} Mr. S. Smith.
---	-----------------

November.

Fifty Insects from Saxony Wool	Mr. John Smallpage.
--------------------------------------	---------------------

A Collection of 1800 Specimens of British Insects, belonging to the late Mr. John Atkinson, Curator	} Purchased by the Society.
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April.

- 189 Brazilian Insects, including Phasma-
gigas, Locusta Dux, &c. } Purchased by the Society.
Pair of Pinnotheres Cranchii. }
And one of Pinnotheres varians } Mr. H. Denny.

Spatangus Ovatus, from Dublin Mr. John Smallpage.

A very fine Specimen of Madrepora, (Ma-
drepora Palmata) from Montego Bay, } Wm. Brown, Esq. St. John's
West Indies } Newfoundland, by Charles
Brown, Jun. Esq.

Cranium of the Guinea Pig (Cavia Cabaia)

———— of the Hedgehog (Erinaceus Eu-
ropæus)

———— Chinese Bonnet Monkey (Simia
Sinica)

———— of the Otter (Lutra Vulgaris)..

COINS, ANTIQUITIES, AND MISCELLANEOUS DONATIONS.

August.

Portions of a Human Skull from one of
the Stone Coffins in Kirkstall Abbey } Mr. William Trant.

Chinese Astronomical Kalendar .. Thomas Meade, Esq.

November.

Silver Coin of Charles II. Mr. T. P. Dickinson.

Crystals of ——— in Glass Mr. John Cawood.

January.

Republic Francaise, Assignat de Quarter
Cents Livres—dated the 21st Nov. } John Hill, Esq. West Lodge,
1792 } Ripon.

- Three Copper Coins of Constantine, from }
Herculaneum } Mr. Joseph Dickenson.
- A Malay Crease, Ancient Scimitar, and }
Dagger } Mr. John Kendell.
- Specimens of Tapa or Cloth made from the }
Bark of the Paper Mulberry Tree } Rev. Dr. R. R. Bloxam, Rugby.
(Morus Papyrifera) }
- Portions of Roman Bricks found near }
Halifax } Mr. Fredk. Charles Spencer,
Halifax.

DONATIONS TO THE LIBRARY.

September, 1828.

- An Enquiry concerning the Connection of }
Mind and the Brain, with Remarks } Mr. Wm. Wildsmith, the
on Phrenology and Materialism } Author.
- On the Curative Influence of the Southern }
Coast of England, by W. Harwood, } J. Harwood, Esq. M.D.
M.D. }
- Remarks upon an Egyptian History in }
Egyptian Characters, in the Royal } Dr. G. Seyffarth, the
Museum in Turin } Author.

December.

- The Transactions of the Royal Society of }
Edinburgh, from the 4th to the 11th } The Royal Society of Edin-
Vol. } burgh.
- Biot's *Traite de Physique a Paris*, 1816, }
4 vols. 8vo. } James Entwisle, Esq.
- Copy of the first Book printed at Woahoo, }
one of the Sandwich Islands. } Rev. Dr. R. R. Bloxam.

March, 1829.

- | | | |
|---|---|--|
| An Address delivered at the Anniversary Meeting of the Zoological Club of the Linnean Society, by Joshua Brookes, Esq. F.R.S. L.S., &c. | } | Presented by the Author. |
| | | |
| On a new Genus of the Order Rodentia, by Joshua Brooks, Esq. F.R.S., &c. | } | Do. |
| | | |
| Illustrations of the Geology of Yorkshire, or a Description of the Strata and Organic Remains of the Yorkshire Coast, by John Phillips, M.G.S., &c. | } | Presented by the Author. |
| | | |
| Five Prints published by the Antiquarian Society, viz.
Knaresborough Castle
Pontefract Castle
The Roman Roads of Yorkshire
Table of English Silver Coins
Table of English Gold Coins | } | F. T. Billam, Esq. |
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| | | |
| Annual Report of the Yorkshish Philosophical Society | } | Yorkshire Philosophical Society. |
| | | |
| Premiums offered by the Society for the Encouragement of Arts, Manufactures, and Commerce during the Years 1828 and 1829, | } | The Society of Arts, London. |
| | | |
| Travels of Ibn Batuta, translated from the abridged Arabic Manuscript Copies preserved in the Public Library of Cambridge, by the Rev. Sam. Lee, B.D. Professor of Arabic to the University | } | The Oriental Translation Committee of the Royal Asiatic Society. |
| | | |

BOOKS PURCHASED.

Phillips's Mineralogy.

Temminck's Manuel d' Ornithologie.

LIST

OF

OFFICERS AND COUNCIL.

OFFICERS.

President	Michael Thomas Sadler, Esq. M.P.
Vice-Presidents.....	{ Rev. Joseph Hutton, LL.D.
	{ Francis Thomas Billam, Esq.
Treasurer	William Williams Brown, Esq.
Secretaries	{ Wm. Osburn, Jun. F.R.S. Ltd.
	{ William West.
Curator and Librarian	Edward Sanderson George, F.L.S.
Sub-Curator	Henry Denny.

COUNCIL.

John Atkinson, Jun.	William Hey
Edward Baines, Jun.	Wm. Hey, Jun.
Joshua Dixon,	John Marshall, Esq. M.P.
Rev. John Dodsworth,	John Sangster,
William Gott,	T. P. Teale,
John Hey,	John Wilkinson.

LEEDS :

PRINTED BY EDWARD BAINES AND SON.

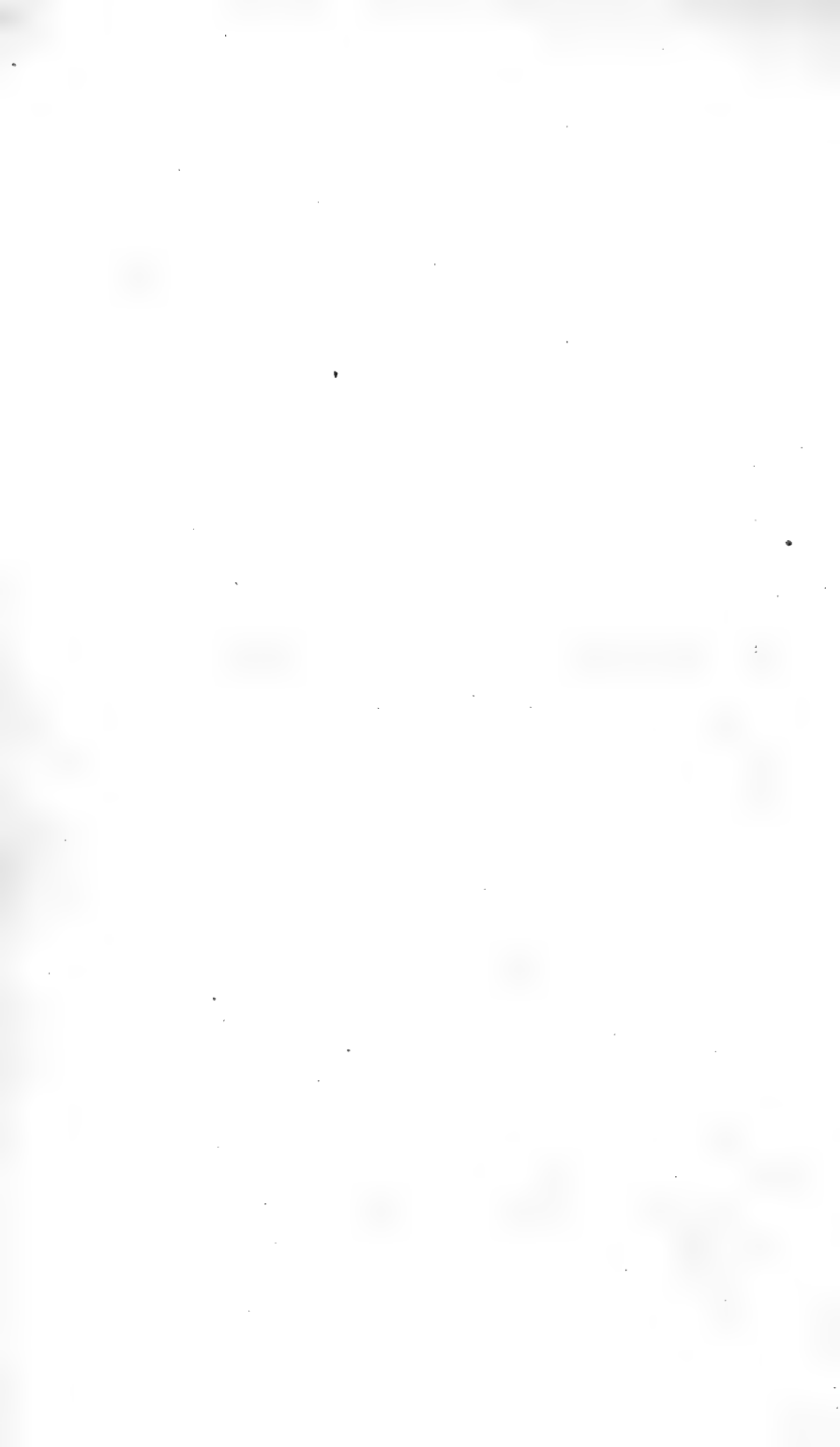
Extract

FROM MINUTE OF COUNCIL,

OCTOBER 7th, 1828.

THE Council of the Philosophical and Literary Society, having received intelligence of the death of Mr. JOHN ATKINSON, who had held the office of Curator and Librarian to the Institution from its earliest commencement, cannot suffer the present opportunity to escape of distinctly recording their sentiments upon an event so melancholy, and a loss so severe. In recalling the memory of their able coadjutor and amiable friend, they are penetrated with unaffected regret. To his indefatigable exertions the origin of the Society was greatly indebted; to his liberal gifts and sedulous attentions the existence of the Museum may be attributed; while the success of the other departments, not immediately under his cognizance, often bore witness to his zeal, and always afforded him the most sincere satisfaction. It is with a saddened self-gratulation that they can refer to the results of those labours which they have long watched and admired—labours which were cheerfully prosecuted, notwithstanding the claims of an arduous profession, and which were scarcely abated amidst the encroachments of long protracted disease.

These form his durable monument, and many, as they gaze upon it, will cherish the name and honour the attainments of the skilful naturalist whom it silently but emphatically commemorates. On other tablets are his modest and endearing virtues engraved. Nor can the Council pourtray and celebrate an example of so much worth, of talent so well directed, of diligence so disinterested in its motives and so beneficial in its operation, without feeling and publishing the fervent desire, that they and their fellow-members may be stimulated by it to renewed and augmented exertions.





TENTH REPORT

OF THE

COUNCIL OF THE

LEEDS

Philosophical & Literary Society,

AT THE

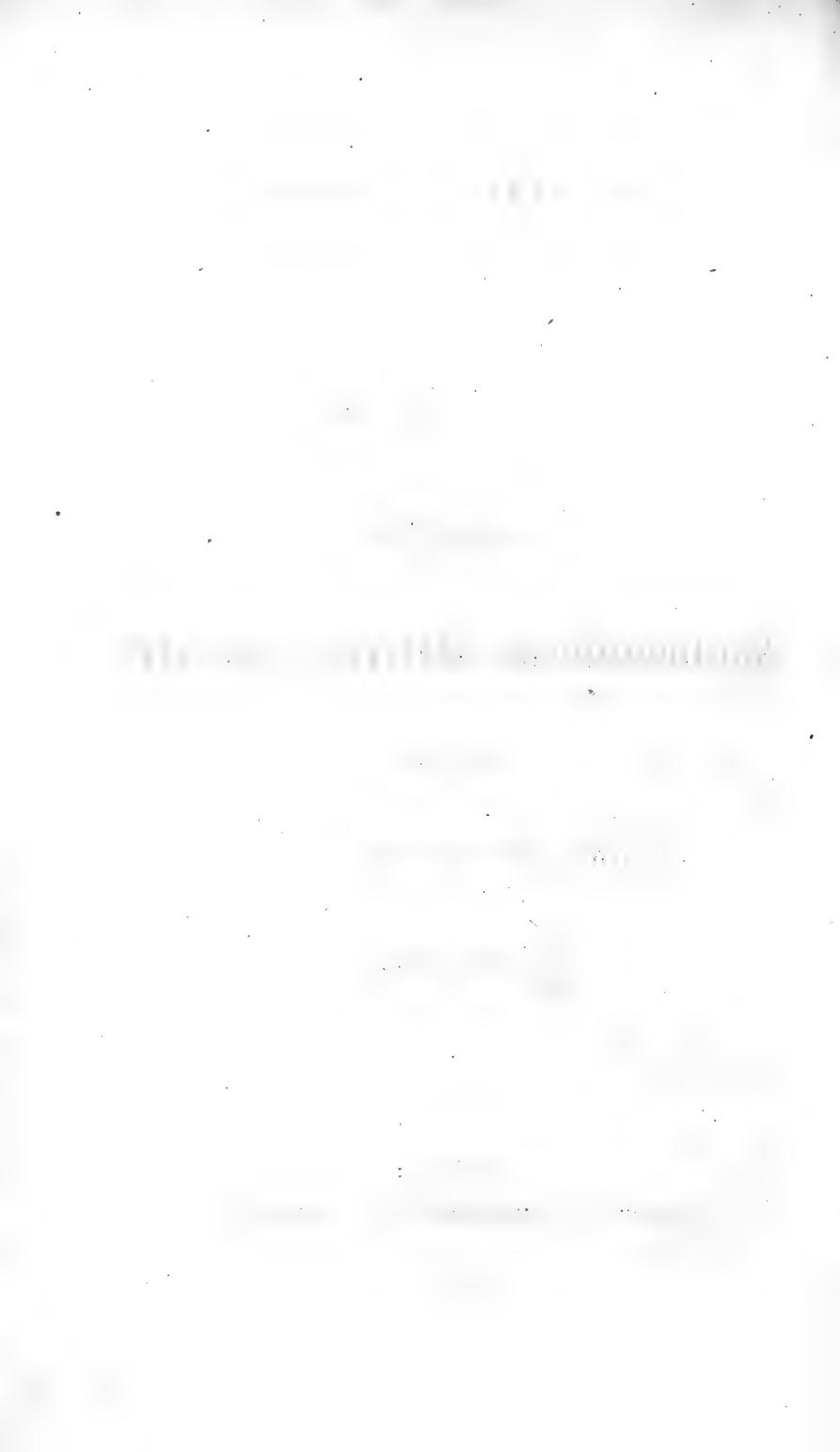
CLOSE OF THE SESSION,

1829-30.

LEEDS :

PRINTED FOR THE SOCIETY, BY T. INCHBOLD.

MDCCCXXX.



REPORT OF THE COUNCIL,

AT THE CLOSE OF THE TENTH SESSION.

IN presenting the TENTH ANNUAL REPORT of the Society, the Council regret that it will have to assume a somewhat less confident tone of triumph than those that have preceded it, and a more urgent call upon the Scientific and Literary Contributions of its Members.

The Funds of the Society have experienced a further deterioration, as will be seen by a reference to the Treasurer's Report ; a balance of £30. 17s. 11d. is due to him. They regret also to state, that Twenty-two Ordinary Members' Tickets have been forfeited or resigned during the Session.

In reporting upon the Museum it becomes the melancholy duty of the Council to state, that the Office of Curator is again vacant by the death of the respected and excellent individual who was so recently elected to it. Having already put upon record their sentiments on this distressing event, they might have now contented themselves

with a mere reference to the able document which embodies them.* They conceive, however, that

Extract from the Minutes of Council, Feb. 26, 1830.

* "That the premature death of our valued friend and associate, Edward Sanderson George, Esq. F.L.S. Honorary Curator of our Museum, has excited in our breasts feelings of unfeigned and deep regret. That had we known Mr. George in no other than his private character, we could not have heard with indifference of the mournful dispensation which has suddenly removed from the social circle an individual so well fitted, by his talents and virtues, to adorn it;—a young man, the fair promise of whose youth had already ripened into performance, and in whom, all who knew him must have recognised, with affection and esteem, the possessor of well cultivated powers, virtuous principles, amiable dispositions, and pleasing address. That while we cannot forego the present opportunity of expressing our sincere respect for Mr. George's general character, we feel ourselves particularly called upon, as Members of the Leeds Philosophical and Literary Society, to place on record our high estimate of his intellectual attainments, and our grateful recollection of the invaluable services which they enabled him to confer on that Institution, in the support of which he was associated with ourselves. That in reviewing the causes of the present prosperous state of our Society, we desire never to forget our debt of gratitude to departed friends and coadjutors, on the list of whom we are now to register the name of Mr. George, a pure and ardent lover of science, who assisted in the first formation of our Society, and never ceased to exert himself actively and ably in its behalf, punctually lending his valuable aid in the Council, employing his scientific skill in the arrangement of the Museum, to which he contributed at various times many important donations, and favouring the Society with many interesting papers and lectures, in which useful knowledge was communicated with clearness, perspicuity, and manly simplicity of style, and with unaffected modesty of manner. That while we are impressively reminded by the death of Mr. George, so soon succeeding that of his excellent and regretted predecessor Mr. Atkinson, of the mutability of every thing human, we console ourselves with the cherished hope, that the labours of the wise and good will not be in vain, nor their example without influence; but that, as they depart hence, others of like mind will step into their place, and the good cause of knowledge and of virtue continue to advance, notwithstanding the successive removals of its honoured and lamented supporters."

they cannot better serve its interests than by again bringing the subject before the Society, and again urging upon its members the necessity of supplying, by their assistance, the void which this mournful occurrence has occasioned in its efficient and active supporters. The extent and depth of the loss which the Society has sustained, in being deprived of the talent, the zeal, and the diligence of its late lamented Curator, will be most correctly estimated by considering the very small number from whom his assistance has been removed. In the ten years that have elapsed since its formation, one hundred and twenty papers have been read at its general meetings; for the whole of these contributions it is indebted to thirty-two members, of whom only twenty-five now remain in connexion with the Society. It is, therefore, from this very limited number that the influence of their lamented friend has been really abstracted, and upon this fact the Council rests its earnest appeal to the Members generally for their more extended and cordial co-operation; because, by that alone the character and credit of the Society can be maintained.

The Museum has received an accession of many valuable presents in the course of the year. The following entitle the Donors in an especial manner to the thanks of this Society :—

A very fine Specimen of the Skull of the Asiatic Elephant (*Elephas Asiaticus*;) two Skulls of the Wild Ox of India (*Bos Gour*,) and several Horns of ditto; Tusks of Wild Boar; Canine Teeth of the Tiger, &c.—By John Marshall, Esq. M. P.

Seven rare British Birds, viz. Stork, Spoonbill, Bittern, Male Smew, pair of Bearded Titmice, and the Knot or Red Sandpiper.—By Wm. Gott, Esq.

A magnificent Specimen of the Brain Madrepora (*Madrepora Labryinthica*) from the Bermudas, weighing 16 stone—by John Wilson, Esq. Seacroft.

A Collection, 40 Specimen of Plants, from the Coal Field near Bierley—by Rev. G. S. Bull, Bierley, near Bradford.

A Collection of Specimens in various departments, from North America, viz. 43 Birds, 9 Animals, 50 Insects, 2 Snakes' Skins, 2 Wasps' Nests, &c. &c.—by Wm. Heycock, Esq.

A Specimen of the Crested Porcupine (*Hystrix Cristata*)—by Benj. Gott, Esq.

Fine Specimens of Inocerrimi and Coal Plants—the Venerable Archdeacon Wrangham, Hunmanby.

19 Articles of Dress, Implements, Weapons, Idol, &c. &c. used by the South Sea Islanders—George Bennet, Esq.

It will be seen in the Cash Account, that a larger sum than usual has been appropriated to the purchase of objects of Natural History. The Council will not offer a single word in justification

of this measure, which at once adds to the property of the Society, and to the utility of its Museum, and which was, in the present instance, plainly pointed out by the necessities of the case. The scientific arrangement of the Museum is now drawing towards its completion. The Society's Collection in Mineralogy and the Crustacea, have already been favourably noticed on former occasions ; and it gives the present Council pleasure to be able to add to these, the departments of Ornithology and Entomology, in both of which the Museum can now boast of a very respectable number of Specimens, and to report that their preparation and arrangement does great credit to the science, the assiduity, and the taste of the Sub-Curator, Mr. H. Denny.

Two Courses of Lectures have been delivered before the Society, during the Session : the one on Chemistry and Electricity, by Mr. Murray, an individual who has distinguished himself both as a scientific author and lecturer ; the other by the Society's Honorary Member, Mr. Phillips, of York, whose high scientific attainments are now so fully appreciated throughout the Republic of Letters, as to require no eulogy on the present occasion. The Council add, with great regret, that though neither the one nor the other of these Courses was adopted without mature deliberation on their

part, and though the great merit of both fully justified the preference which the Council gave to them, amongst the many similar Courses that were offered to their notice, yet the event has proved very far from favourable to the interests of the Society. The Council would by no means have ventured upon this remark, had they merely had to regret the loss of nearly the whole Honorarium in both instances. For however heavily this may press upon the funds of the Society, yet had it been in their power to report that the Lectures were delivered to large classes of Members, who of course are entitled to free admission, they would have considered that the purpose for which those funds were contributed had been abundantly answered, namely, the diffusion of scientific knowledge. Such, however, was by no means the case; the attendance upon both was to the last degree scanty and discouraging.

The following Papers have been read at the Ordinary General Meetings of the Society.

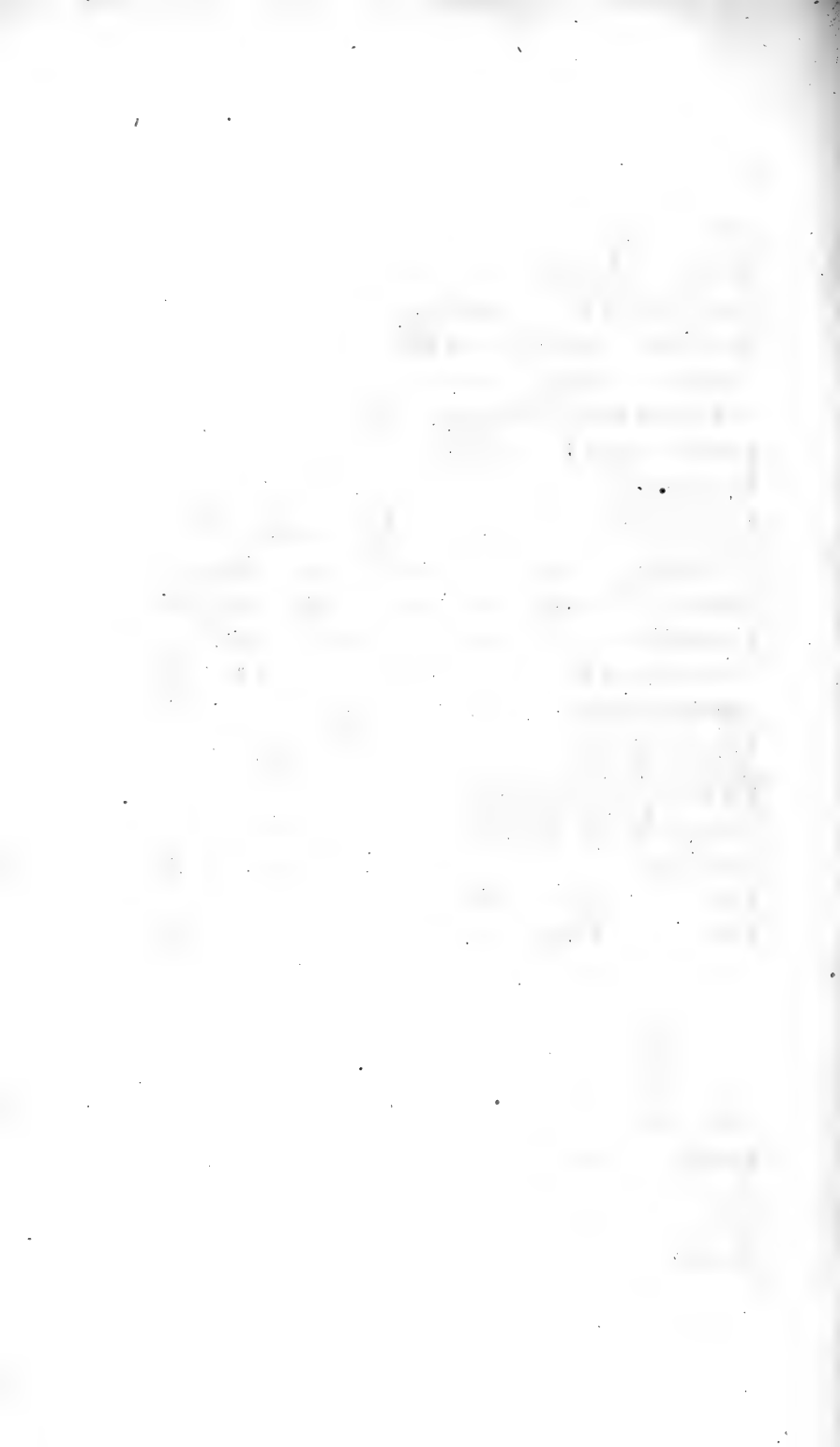
1. On Synonyms—by the Rev. R. W. Hamilton—(read October 23rd, 1829.)
2. On the Varieties of Water—by Mr. Wm. West—(read Nov. 6th, 1829.)
3. On the Advantages of Civilization to Mankind, and on the Possibility of promoting it by simple and direct Methods—by Luke Howard, Esq. F.R.S.—(read Nov. 20th, 1829.)

4. On the Logic of Aristotle—by Samuel Bailey, Esq. of Sheffield—(read Dec. 4th, 1829.)
5. On Digestion in Animals—by Mr. John Phillips, of York, F.G.S.—(read Dec. 18th, 1829.)
6. A Review of the Progress of Classical Literature, as connected with some of the Universities and Literary Establishments in Europe—by the Rev. John Dodsworth—(read January 1st, 1830.)
7. On the Necessity for Exertion, as promoting the Progress of Civilization—by M. T. Sadler, Esq. M.P.—(read Jan. 15th, 1830.)
8. On the German Literature of the Eighteenth Century—by James Entwisle, Esq.—(read Feb. 5th, 1830.)
9. On the Moral Influence of Free Trade—by Mr. Edward Baines, Jun.—(read Feb. 19th, 1830.)
10. On the History and Antiquities of Churches in England—by F. T. Billam, Esq. V.P.—(read March 5th, 1830.)
11. On the Tune and Rythm of the Human Speech—by Mr. John Wilkinson—(read March 19th, 1830.)
12. On the Nature and Extent of Mathematical Evidence—by the Rev. William Turner, of Halifax—(read April 2nd, 1830.)
13. On the Choice of our Subjects of Study—by the Rev. Joseph Hutton, L.L.D.—(read April 16th, 1830.)

The subjects of these communications have generally been discussed afterwards, and often at some length. The Council would fain express the hope, that this part of the business of the ordinary meetings is in a state of progressive improvement. Two Honorary Members have been elected during the Session, Davies Gilbert, Esq. Pres. R. S. and the Venerable Archdeacon Wrangham. The Council have pleasure in reporting favourably of the sale of the "Account of Mr. Blayds's Mummy," which was published two years ago at the Society's expense. Although nearly one hundred copies were presented to various learned societies and individuals in this country and on the continent, and although they are charged to members at a rate which barely covers the first cost, yet already is the Society nearly remunerated, and as several copies remain on hand, and the demand still continues, the Council entertain the confident hope that the funds will ultimately be benefitted by the undertaking.

In concluding their Report, the Council wish to observe, that notwithstanding the untoward circumstances to which they have been compelled to advert, they do not hesitate to express their full persuasion that the value and utility of the Society are rapidly increasing: and that already has one important benefit resulted from its establishment

which its founders could scarcely have anticipated. Wisely and judiciously excluding those agitating questions, in the discussion of which the brotherly affections of men are torn asunder, it has furnished a refuge to which the mind, wearied with the jar of discordant opinions, may betake itself and find peace. And he who came to the Hall of this Society merely for the purpose of acquiring scientific and literary information has often retired from it, having learned the much more important lesson, to forget in the many points upon which his opinions and interests are identified with those of his fellow townsmen, the few upon which they may be severed: and to entertain friendly feelings towards them, however widely different may be the complexion of their religious or political creeds, because he has conversed with them face to face, and found them worthy of his esteem. If this advantage has followed in the train of the Leeds Philosophical and Literary Society, its members have abundant cause to exult in their institution; for in adding to the peace, the prosperity, and the happiness of their native town, it has conferred more lasting benefits than would have arisen from the most brilliant discoveries in science, or the most splendid displays of literary talent.



TREASURER'S STATEMENT. LEEDS PHILOSOPHICAL & LITERARY SOCIETY. AT THE CLOSE OF THE TENTH SESSION.

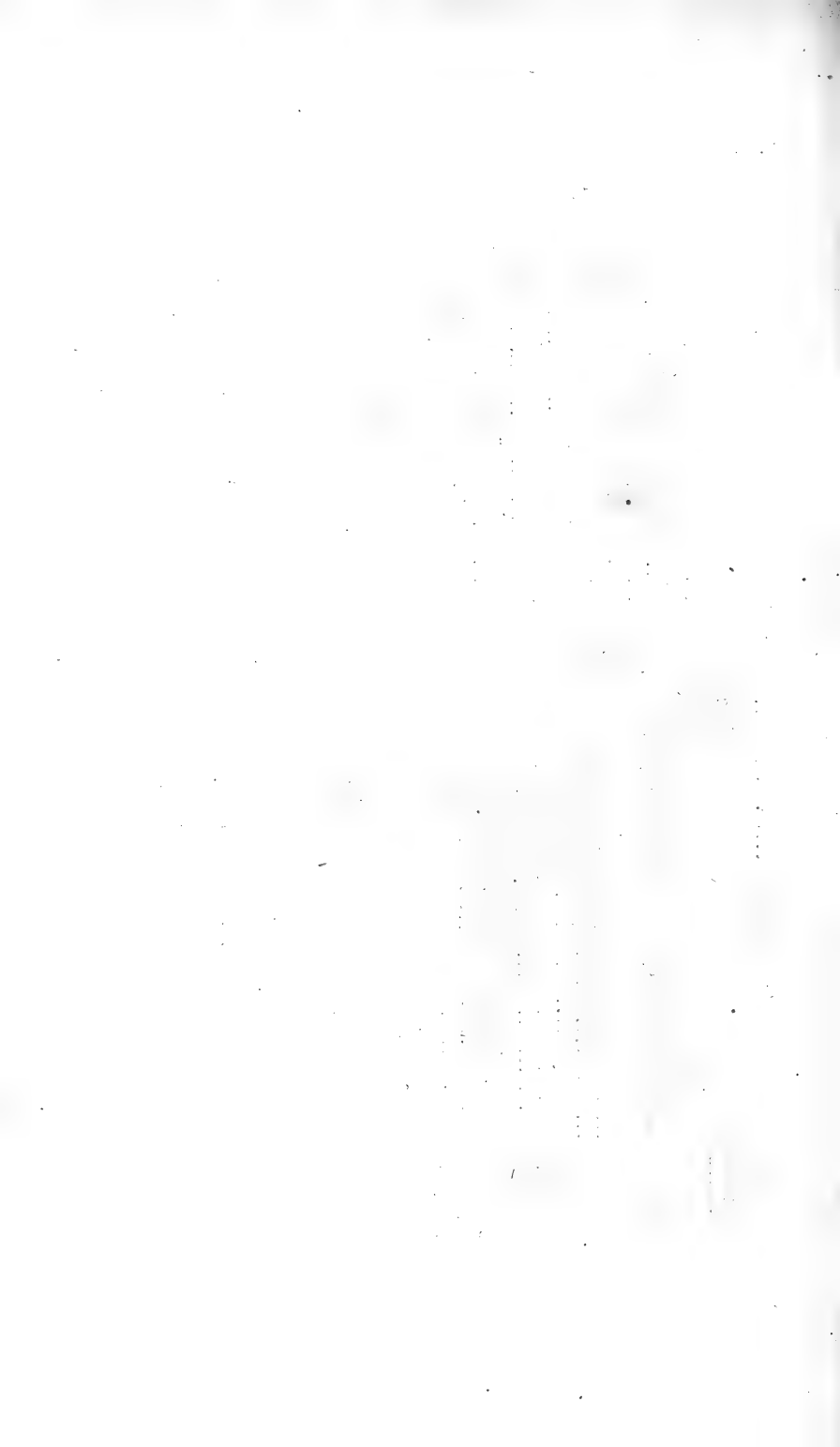
ORDINARY FUND.

DISBURSEMENTS.		RECEIPTS.	
	£. s. d.		£. s. d.
To Balance Due to Treasurer	15 11 2	By Subscriptions of 129 Members	270 18 0
Mr. H. Denny	100 0 0	Fines	35 2 6
Mr. Phillips for Lectures	40 0 0	Arrears of Subscriptions and Fines	21 4 0
Mr. Murray for Lectures	20 0 0	Deposits and Subscriptions of 2 new Members ..	10 10 0
Insurance	11 15 0	Mr. Murray's Lectures	2 1 0
Taxes	5 19 5	Mr. Phillips' Lectures	2 9 0
Coals	8 18 0	Sale of Insects	0 10 0
Oil Gas	11 8 0	Sale of Mummy Books	1 9 0
Tradesmen's Bills	67 19 3	Robinson & Hermann for Ditto Sold	7 0 0
Printing and Advertising	3 17 0		
Books, Stationary, &c.	40 17 0		
Purchase and Carriage of Specimens	48 0 5		
Sundry Expenses, Letters, &c.	9 18 9½		
Interest due to the Treasurer	2 1 3		
	380 5 3½	Cash in the Hands of the Sub-Curator, May, 1829	351 3 6
			4 3 10

Balance due to the Treasurer £ 30. 17s. 11d.

355 7 4

30 17 11½
385 5 3½



DONATIONS

TO

THE SOCIETY'S MUSEUM.

*Those marked † are Members of the Society, thus * Honorary Members.*

GEOLOGY AND MINERALOGY.

1829.

AUGUST.

- | | | |
|---|---|---|
| A number of Geological Specimens
from Scarborough
Madrepore and other Specimens,
from Moughton-fell. | } | *Mr. E. S. George. |
| 40 very fine Specimens of Plants,
&c. from the Coal Field, near
Bierley. | } | Rev. G. S. Bull, Bierley,
near Bradford. |
| Very fine Specimen of Calamites,
found in excavating Quarry-hill. | } | † Lepton Dobson, Esq. |

SEPTEMBER.

- | | | |
|--|---|------------------------|
| Specimen of Clay-slate, from the
Summit of Arthur's Seat, Edin-
borough. | } | * Mr. W. S. Dickinson. |
|--|---|------------------------|

OCTOBER.

- | | | |
|--|---|----------------|
| 2 Specimens of Fish from the Isle
of Sheppey. | } | † Mr. John Hey |
| 2 Fragments of Horns, belonging to
a Species of Cervus. | | |
| 13 other Geological Specimens. | | |

Specimen of Granite and Crystals
of Quartz, from Quebec, North
America. } Mr. W. Waite, East Parade

NOVEMBER.

60 Specimens of Felicites Calamites
Equestum, and other Plants, from
the Coal Measures, near Shelf,
Yorkshire. } Purchased by the Society.

Specimen of Oxyde of Lead † Mr. Benj. Jackson.

Crystals of Muriate of Ammonia . . Leeds Coal Gas Company.

3 fine Specimens of Inocerrimi,
from Hunmanby. } The Venerable Archdeacon
Filicites and Cycadites, from the } Wrangham, Hunmanby.
Scarborough Coast.

Crystals of Muriate of Ammonia }
upon Coal. } Mr. Sunderland.

1830.

JANUARY.

Fine Specimen of Forrest or Bristol
Marble. } † Mr. H. S. Smith.

FEBRUARY.

Specimen of Lead Ore, from the }
Mines of Adra, near Malaga. } Mr. H. B. Rose, Bristol.

Specimen of Conical Iron Ore, from }
Gomersall. } Edwd. Swaine, Esq.

Crystals of Quartz, from Harrogate, }
(vulgo. Harrogate Diamonds.) } Miss Banks, Leeds.

Very fine Specimen of Rutel, in }
Quartz, from Craig na Cailliach. } Mr. John Hey.

Specimen of Arragonite. Rev. W. Kirby, M.A. F.R.S.
Barham.

ZOOLOGY.

1829-30.

JULY.

- 3 Horns of Antelopes, viz. 2 Horns
of Oryx Addax, 1 Do. of Dama-
lis Caama. } Mr. Thos. Robinson.

OCTOBER.

- Nine Animals from North America,
viz. :
2 Specimens of the Grey Squirrel,
(Sciurus Cinereus.)
2 Specimens of the Ground Squirrel,
(Sciurus Striatus.)
Musk Rat, (Fiber Zebethicus.)
And 4 Bats. } Wm. Heycock, Esq.

NOVEMBER.

- Crested Porcupine, (Hystrix cris-
tata.) } † Benj. Gott, Esq.

DECEMBER.

- Eatable Bat, (Pteropus Edulis.) . . Purchased by the Society.

JANUARY.

- Bengal Tiger, male, (Felis Tigris.) } Purchased by the Society.
Lioness, (Felis Leo.) }
Stuffed Specimen of the Common
Ouistiti, (Simia Jacchus,) and } † Mr. H. S. Smith.
another Monkey unknown. }

MARCH.

- Weasel (Mustela Vulgaris.)
3 Varieties of the Stoat or Ermine,
(Mustela Erminea)
2 Fomarts, (Musteta Putorius.) } Mr. William Waite,
East Parade.

APRIL.

- Species of *Dasyurus*, from New S. Wales, (*Dasyurus* ———.) } Mr. Thos. Shann, Jun.
- Dormouse, (*Myoxus Avellanarius*.) Purchased by the Society.
- Stuffed Specimen of a Cream Coloured Variety of the Mouse, (*Mus Musculus*.) } † Mr. H. S. Smith.
- Otter, (*Lustra Vulgaris*.) Purchased by the Society.

JUNE.

- Pair of Goatsuckers, (*Capramulgus Europæus*.) } Mr. Waite, Burley.

JULY.

- 7 Rare British Birds, viz.—
- Stork, (*Ciconia Alba*.)
- Spoonbill, (*Platea Leucorodia*.)
- Bittern, (*Ardea Stellaris*.)
- Male Smew, (*Mergus Albellus*.)
- Bearded Titmouse, (*Parus Biarmicus*.) m. and f.
- Knot or Red Sandpiper, (*Tringa Canutus*.)
- Brown-headed Gull, (*Larus ridibundus*.) } † Wm. Gott, Esq.
- Gargany, (*Anas Querquedula*.)
- Pigmy Curlew, (*Tringa Subarquata*)
- Reeve, (*Tringa Pugnax*.)
- Turtle Dove, (*Columba Turtur*.)
- Bearded Titmouse, (*Parus Biarmicus*)
- Stone Curlew or Norfolk Plover, (*Charadrius Oidicnemus*.)
- Red-breasted Godwit (*Limosa Rufa*)
- Cambridge Godwit, (*Totanus Fuscus*)
- Cinereus Skrike, (*Lanius Excubitor*)
- Corvorant (*Pelicanus Carbo*.) Richard Matthewman, Esq.

SEPTEMBER.

- | | |
|---|---|
| Grasshopper, Warbler, (<i>Sylvia Locustella</i> .) | } William Farrer, Esq. M. D.
Barnsley. |
| Pied Flycatcher, (<i>Muscicapa Atricapilla</i> .) | |
| Passerine Warbler, (<i>Sylvia Passerina</i> .) | |
| Mountain Bunting, (<i>Emberiza Montana</i> .) | } †Mr. Wm. Osburn, F.R.S.L.
(Secretary.) |
| Grey Phalarope, (<i>Phalaropus Lobatus</i> .) | |
| Coot, (<i>Fulica Atr.</i>) | |
| Male Wigeon, (<i>Anas Penelope</i> .) | |

OCTOBER.

- | | |
|---|---------------------|
| 43 Birds from North America, viz. | } Wm. Heycock, Esq. |
| Pair of Red-Headed Woodpeckers, (<i>Picus Erythrocephalus</i> .) | |
| Pair of Purple Grakles, (<i>Gracula Quiscal.</i>) | |
| Pair of Baltimore Orioles, (<i>Oriolus Baltimorus</i> .) | |
| 3 Red-shouldered Oriole, (<i>Oriolus Phænicus</i> .) | |
| Pair of Yellow-billed Cuckows, (<i>Cuculus Carolinensis</i> .) | |
| Passenger Pigeon, (<i>Columba Migratoria</i> .) | |
| Blue Robin, (<i>Motacilla Sialis</i> .) | |
| Pair of Cat Birds, (<i>Turdus Levidus</i> .) | |
| Stare or Meadow Lark, (<i>Alauda Magna</i> .) | |
| Pair of Indigo Birds, (<i>Fringilla Cyanea</i> .) | |
| Pair of Scarlet Tanagers, (<i>Tanagra Rubra</i> .) | |
| Brown Thrush, (<i>Turdus Rufus</i> .) | |
| Pair of Orchard Orioles, (<i>Oriolus Spurius</i> .) | |
| Cow Bunting, (<i>Emberiza Pecoris</i> .) | |
| Pair of Towhe Buntings, (<i>Emberiza Erythrophthalma</i> .) | |
| Tyrant King Bird, (<i>Lanius Tyrannus</i> .) | |

Red-breasted Thrush, (Turdus Migratorius.)	} Wm. Heycock, Esq.
Spotted Sandpiper, (Tringa Macularia.)	
Sanderling Plover, (Charadrius Caladris.)	
Downy Woodpecker, (Picus Pubescens.)	
Crested Flycatcher, (Muscicapa Crinita.)	
Kildeer Plover, (Charadrius Vociferus.)	
Pair of Goatsuckers, (Capramulgus Americanus.)	
Yellow-shank Snipe, (Scolopax Flavipes.)	
Partridge Hawk, (Falco ———.)	
Pigeon Hawk, (Falco Columbarius.)	
Common Tern, (Sterna Hirundo.)	} † Mr. Wm. Osburn, F.R.S.L. (Secretary.)
Umbelated Grouse, (Tetrao Umbellus.)	
Gannet or Solan Goose, (Pelecanus Bassanus.)	
Whimbrel, (Numenius Pheopus.)	
Grey Parrot, (Psittacus Erithacus.)	} Purchased by the Society.
Pair of the Nuthatch, (Sitta Europæa.)	
	} † John Wilson, Esq. Seacroft.

DECEMBER.

4 Birds from Van Dieman's Land :	} Miss Lupton.
Musk Duck.	
Bittern.	
Goatsucker.	
Pair of Doves.	} † Mr. John Heaton.
Short-eared Owl, (Strix Brachyotus.)	
39 New Holland Birds, including	} Purchased by the Society.
King Parrots, Nankeen Herons,	
Wattle Birds, Black Sattin Cuckows,	
Flinders's Cuckow, Cobblers' Awls,	
Blue-breasted Parroquet, Sandpi-	
pers, Crowned Pigeons, Bronze-wing-	
ed Dove, Meliphaga's Grebe, Cat	
Bird, &c.	

- Male Black Grouse, (*Tetrao Tetrix*) † Wm. Gott, Esq.
 Crested Grebe, (*Podiceps Cristatus*) † Mr. J. H. Ridsdale.

JANUARY.

- Red-necked Grebe, (*Podiceps Ru-*
 bricollis.) } † Mr. Wm. Osburn, F.R.S.L.
 Black-backed Gull, (*Larus Marinus*) } (Secretary.)
 Herring Gull, (*Larus Argentatus*.) }
 Long-Horned Owl, (*Strix Otus*.) . . † George Banks, Esq.
 Green Woodpecker, (*Picus Viridis*) }
 5 Specimens of the Starling (*Sturnus*
 Vulgaris.) } Mr. Wm. Waite,
 Kingfisher, (*Alcedo Ispida*.) } East Parade.
 Bullfinch, (*Loxia Pyrrhula*.) }
 Jay, (*Corvus Glandarius*.) }

APRIL.

- Kittawake Gull, (*Larus rissa*.) . . . † Mr. J. H. Ridsdale.

JUNE.

- Lesser Lamprey, (*Petromizon flu-*
 viatilis.) } Purchased by the Society.
 Sturgeon, (*Acipenser Sturio*.) — } Ditto.
 caught near Selby. }
 Pipe Fish † Mr. Wm. West, Secretary.
 Blind Worm, (*Anguis fragilis*.) . . } † Mr. Wm. Osburn, F.R.S.L.
 Secretary.

AUGUST.

- Skin of a Species of Coluber, from } Major Madden, 50th Regt.
 Jamaica. }

OCTOBER.

- 2 Cast Skins of Snakes, from } Wm. Heycock, Esq.
 America. }
 Skin of the Monitor Lizard, (*Lacerta-*
 varia.) } Mr. Thos. Shann, Jun.

- Stuffed Specimen of the Natter Jack, (*Bufo Rubeta*.) } Mr. Thomas Butler.
 Bull Frog, (*Rana Taurina*.) Purchased by the Society.

JULY.

- 70 Specimens of British and Foreign Shells, many of which are new to the Society's Collection. } † Mr. T. P. Teale.
 8 Specimens of Planorbis, from North America. } Mrs. Kirby, Barham, Suffolk.
 60 Specimens of Shells, Jamaica . . Major Madden, 50th Regt.
 Several Shells from America Wm. Heycock, Esq.
 4 Specimens of the Tiger Cowry, (*Cypræa Tigris*.) } Geo. Bennet, Esq.
 Valve of Pinna Nigrum, from Tahiti. } Geo. Bennet, Esq.

DECEMBER.

- Valve of *Tridacna Gigas*. } * Mr. Thomas Robinson.
 Valve of *Hippopus Maculatus*. }
 Specimens of *Balanus Scoticus* and *Decussatus*. }
 Section of *Fusus Antiquus*, shewing the Chambers. } † Mr. H. S. Smith.

JULY, 1829.

- Several American Insects Rev. W. Kirby, M.A. F.L.S
Macropus Longimanus, (long-armed *Cerambyx*.) } Purchased by the Society.
 A Collection of 200 Brazilian Insects } Purchased by the Society.
 40 African Insects † Mr. H. S. Smith.
 A Species of *Blatta* from Angola, not before in the Society's Collection. } † Mr. J. Lapage.

OCTOBER, 1829.

- 50 North American Insects Wm. Heycock, Esq.
 460 British and Foreign Insects . . Purchased by the Society.

MARCH, 1830.

Several Insects from the Neighbourhood of Ockbrook, Derby . . } Rev. Samuel Hey.

APRIL.

Curious Variety of Vanessa Io, }
(Peacock Butterfly.) } † Mr. H. S. Smith.

AUGUST.

Bird-catching Spider, (Mygale Avicularia.) } Mr. Wm. Brayshaw.

Aphrodita Aculeata, (vulgo Sea-Mouse.) } † Mr. H. S. Smith.

2 Specimens of Fibula Minuta Rev. C. Sutton, D.D. A.L.S. Norwich.

2 Specimens of Oculina Virginia. }
3 Sponges, from Jamaica. } Major Madden, 50th Regt.

Specimen of Plumularia, from America. } Wm. Heycock, Esq.

A Magnificent Specimen of the Brain Madrepora, (Madrepora Labryrinthica Linn.) from the Bermudas, weighing 16 stone, with glass shade to cover it. } † John Wilson, Esq. Seacroft.

Specimen of Asterias Papposa † Mr. Benjamin Jackson.

Very fine Specimen of the Skull of the Asiatic Elephant, (Elephas Asiaticus.) }

2 Skulls of the Wild Bull of India (Bos Gour.) } † John Marshall, Esq. M.P. Headingley House.

Several Horns of Ditto.

Tusks of the Wild Boar.

Canine Teeth of the Tiger, &c. }

Skeletons of the Tiger and Lioness. Purchased by the Society.

Skull of the Porcupine, (Hystrix Cristata.) } † Benjamin Gott, Esq.

- Skulls of the Swine, Cat, Rabbit,
Toumart, Turkey, Pintado, Duck,
Barn-door Fowl, and Razor-bill. }
Skull of a Rat, exhibiting a curious } † Mr. Wm. Trant.
conformation of the upper in-
cisors, which are very much
elongated and curved backward. }
Skull of the Polar Bear, (Urius Ma- } Mr. Benjamin Jackson.
ritimus.) }

COINS, ANTIQUITIES & MISCELLANEOUS DONATIONS.

- 17 Impressions of Ancient Seals, viz.
Cloth Seal for the County of Essex,
1420.—Seal of the Mayoralty of
the Staple of Ipswich.—Ancient
Fibula, found near Mettingham
Castle, Suffolk, probably of Wm.
de Belemonti, 1280.—From a
Lead Matrix.—Seal of the Dean
of Beccles, 1450.—Seal of the
Superior of the Friars Minors, at
Dunwich.—Merchants' Seal, with
the Mark of Rauf Maghtelt.—
Roman Brass Ring, figure a Swan,
found near Yarmouth.—From a } Mr. Samuel Woodward,
Copper Gilt Ring.—From a Brass } Norwich.
Ring, found near Norwich Ca-
thedral.—From a Brass Ring,
found at Coltishall.—Seal of Ri-
cardi Blanwie.—Seal of John
Arnold.—Seal of Ivo de Vilarisl-
co.—Seal of R. Gardinu, Secular
Priest, found near Norwich.—
Seal Wil. Fil. W. Natin. dies
ΦLV, 1255, found near New
Buckenham, Norfolk.—Sauncte
Lawrence, found in Yaxham
Church Yard, Norfolk. }

- Specimens of the Aleppo Gall † Mr. Josiah Davey.
- One of the Stones of a Quern, found
in excavating Quarry Hill. } † Mr. John Cawood.
- Another, found in Netherdale Beck }
- Sweedish Copper Coin. } A Friend.
- Russian Copper Coin. }
- An Apparatus for exhibiting M.
Clement Desormes's Experiments
on Currents of Air, &c. } Robert Young, Esq.
Sheffield.
- Fan from Ceylon, made with the leaves
of the Talipot Tree, or great Fan
Palm (*Corypha Umbraculifera*.) } Mr. John Burton,
Roundhay.
- Set of Casts from the Napoleon
Medals. } Purchased by the Society.
- Two Wasps' Nests from America. }
- Specimens of Wood bored by a
Species of *Xylocopa*, (Timber
boring Bee.) } Wm. Heycock, Esq.
- Lead Coin, found near the Foss } † Mr. R. C. Battye.
- Bridge, York. }

DECEMBER.

- An Instrument called a Penoo, used
for bruising the Kernels of Cocoa
Nuts. }
- Two Stone Adzes, from Tahiti. }
- Two Heads of Do. Do. }
- A Beetle made of Iron Wood, used
by the Females in making the
native Cloth, from the Inner Bark
of Trees. }
- An Instrument used for splitting
the Bread Fruit before or after
roasting it. } George Bennet, Esq.
London,
by Mr. J. P. Clapham.
- Spear Head made of Iron Wood. }
- A Tii or Idol, worshipped by the
Tahitians as a Family Marae. }
- A pair of Mother of Pearl Rattles,
carried and sounded before the
Priest, when approaching the
House where the Idols are placed
and on approaching the Idol for
Worship. }

- A Mother of Pearl Shell, worn at
 the breast by the young females
 of the island of Tubuai.
- Two Feather Ornaments worn by
 Warriors.
- Two Tahitian Cups, made of Cocoa
 Nut Shells.
- Tahitian Vessel for carrying Water,
 made of Cocoa-Nut Shell.
- Cord made from the Fibres of the
 Cocoa-Nut Husk, from Rorotonga
- A Piece of Tahitian Matting.
- A Girdle from the Island of Atui.
- Quivers and Arrows, from Ditto.
- Two Paddles belonging to Chiefs,
 from the Island of Raivavoi or
 High Island.
- Specimens of Indian Rice, in the
 Husk.
- Fifteen Matrices of Roman Coins,
 found at Lingwell, near Wake-
 field.
- Portion of an Ant's Nest from the
 centre of a log of mahogany.
- Cap of a Russian Farmer's Wife ..
- Pair of Dutch Wooden Shoes
- A number of Matrices of Roman
 Coins, chiefly of the Reigns of
 Antoninus Pius and Geta, in one
 of which the Coin still remains.
- Also, an Earthen Funnel, used for
 pouring the metal through into
 the moulds, found with the above
 in a field at Lingwell near Wake-
 field.
- George Bennet, Esq.
 London,
 by Mr. J. P. Clapham.
- † Mr. W. M. Stears.
- † Mr. John Peele Clapham.
- Mr. J. Broadhead.
- * Mr. Thomas Robinson.
- Mr. Thomas Smith.
- † Mr. J. P. Clapham.

DONATIONS TO THE LIBRARY.

AUGUST, 1829.

- | | |
|---|--------------------|
| M. Charas's Experiments upon
Vipers, 12mo. London, 1670. | } Mr. H. S. Smith. |
| The Art of Angling, 12mo. London,
1740. | |
| The Anatomy of Vegetables, by
N. Grew, M.D. F.R.S. 12mo.
London, 1672. | |
| Beck's Ottoman Empire, 8vo. | |
| Nicholson's Airedale & other Poems
——— Lyre of Ebor. | |
| Stillingfleet's Tracts relating to Na-
tural History, 8vo. 1791. | |
| Dr. Buhle's Natural History of
Hamsters, 12mo. Leipsig, 1801. | |
| Withering's Outline of Mineralogy,
translated from the German of
Bergman, 8vo. 1783. | |
| Dr. Hill's Arrangement of Fossils
according to their obvious Cha-
racters, 8vo. 1771. | |
| Catalogue of the Portland Museum,
4to. 1786. | |
| Illustrations of Zoology, containing
50 plates, by Peter Brown, 4to.
London, 1775. | |
| Report of the Bath Institution for
the Year 1828. | |

SEPTEMBER.

- | | |
|---|--|
| An Attempt to ascertain the true
Age of the Porch of St. Marga-
ret's Church, York. | } Presented by Mr. J. Browne,
the Author. |
|---|--|

MARCH, 1830.

Sixth Annual Report of the Bristol
Institution and Philosophical and
Literary Society. } The Council of the Bristol
Institution.

APRIL.

Annual Report of the Yorkshire } The Council of the York-
Philosophical Society, for 1829. } shire Philosophical Society.
Freireis' Natural History of Brazil, } H. Meidinger, Esq.
8vo. } Franckfort.
Copy of the Writ for the Execu- }
tion of Charles 1st. } † Mr. Robert Taylor.

LIST OF OFFICERS, COUNCIL, AND MEMBERS.

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President	Michael Thomas Sadler, Esq. M. P.
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 John Goodman
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 Geo. Walker, *Killingbeck Lodge*
 Thomas Walker, *Killingbeck*
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ELEVENTH REPORT

OF THE

COUNCIL

OF THE

Leeds Philosophical and Literary Society,

AT THE

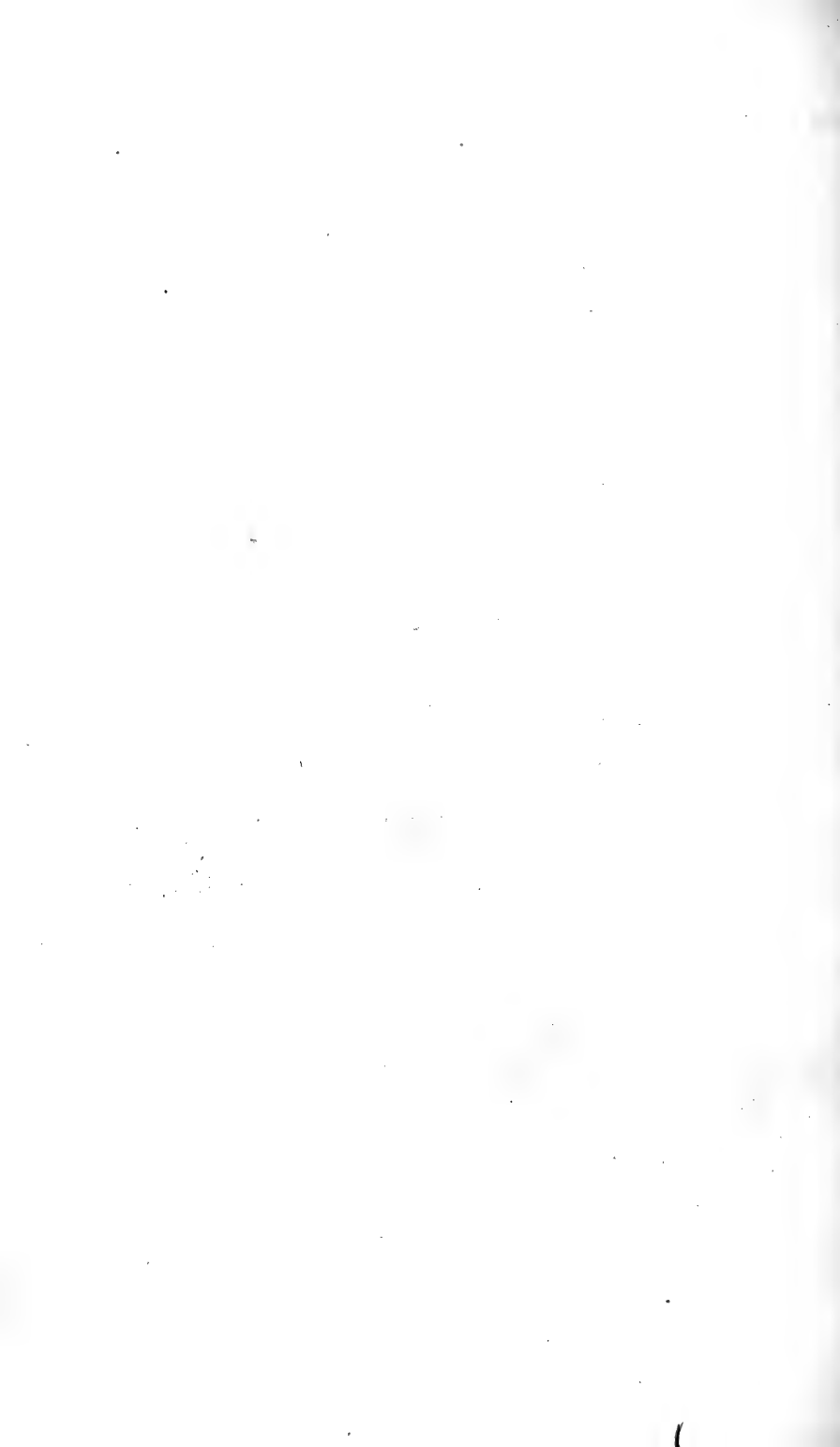
CLOSE OF THE SESSION,

1830-1.

LEEDS :

PRINTED BY HERNAMAN AND PERRING,
COMMERCIAL-STREET.

1831.



REPORT OF THE COUNCIL

AT THE

CLOSE OF THE ELEVENTH SESSION.

In presenting to the Members the Report of the Proceedings of the Eleventh Session, the Council have much pleasure in observing that the Scientific and Literary Papers read during the Session have been varied, animated, and interesting.

The subjects were,

1. "On the Decline of the Roman Empire, as related by Gibbon"—by William West, Secretary—(read October 22d, 1830.)
2. "An Enquiry how far the lower orders of Animals are capable of exercising Reason"—by Mr. Henry Denny, Sub-curator—(read November 5th, 1830.)
3. "On the Application of Mathematical Reasoning to Metaphysical and Moral Science"—by the Rev. James Acworth—(read November 19th, 1830.)

4. "On National and Individual Character, as modified by External Causes"—by Adam Hunter, M. D.—(read December 3d, 1830.)
5. "On some of the Causes which have principally influenced the Progress of Literature and Science in this Country" by M. T. Baines, Esq. Barrister at Law—(read December 17th, 1830.)
6. "On the Antiquity of Warm Bathing in England"—by J. K. Walker, M. D. of Huddersfield.
 "On the Boiling Point of Water, under certain Circumstances, with Memoranda of Experiments"—by William West, Secretary.
- "An Abstract of a Meteorological Register, kept at Ackworth School, for 1830"—by Luke Howard, Esq. F. R. S. Honorary Member of this Society—(read January 17th, 1831.)
7. "On the History of Penal Institutions, illustrated by the Criminal Law of Athens"—by Robert Hall, Esq. Barrister at Law—(read January 21st, 1831.)
8. "On the Advantages of a regulated and permanent System of Emigration"—by J. G. Marshall, Esq.—(read Feb. 4th, 1831.)
9. "A Notice of some Roman Coin Moulds in the Museum of the Society, found at various times, at Lingwell Gate, near Wakefield"—by Mr. John Hey, Curator—(read February 18th, 1831.)
10. "On the probable Results of the present State of Science"—by Mr. J. Hirst Whitehead—(read March 5th, 1831.)

11. "On the Phenomena of Suspended Animation"—by J. P. Kaye, M. D. of Manchester.
12. "On the Yorkshire Dialect"—by the Rev. R.W. Hamilton"—
(read April 8th, 1831.)
13. "On the alleged Influence of certain Occult and Preternatural Causes on the Corporeal Functions, especially in Reference to the Subject of Modern Miracles"—by James Williamson, M.D. Vice-President—(read April, 22d, 1831.)

Subjects of Literature will, in Societies like our own, ever possess more general interest than those of abstract science ; an interest arising from the diffusion, among persons of different habits and pursuits, of that taste for improvement which it is the object and the boast of such Societies to promote : yet in no Session has the Society been without scientific papers ; and in the present there have been three or four of an experimental class which have received equal attention with those which might appear of a more popular character.

It is a gratifying proof that the objects aimed at by this Society have not lost their interest by time, that in no previous year has the supply of papers been more spontaneous and abundant. Had circumstances indeed deprived the Society of the efforts of some of those who have now

come forward, promises of support from other gentlemen were in reserve, which would no doubt have prevented any disappointment being felt. The discussions have in several instances been of a highly interesting character, (more so it may be said than in any former Session,) and some members have spoken for the first time with a degree of talent and success, which may well cause regret that they, and others who have not exerted themselves in this way, should so often remain silent.

Adverting to the Financial Statement, the Council may remark that they have judged it most prudent to exercise determined self-denial in declining, almost entirely, purchases of specimens or of books, which, did their means allow, they would most gladly have added to their collections; by this means, and by rigorous economy in the current expenses of the Institution, they have been enabled to effect a payment of £100 towards their debt, to Messrs. Kendell and Co. for fitting up cases, &c. for the Museum, without much increasing the debt to the Treasurer. The sum of £214. 7s. 4d., however, bearing interest at 5 per cent. yet remains due to Messrs. Kendell and Co. The Society is also indebted to its Treasurer £59. 16s. 1d. on the Ordinary, and £216. 11s. on the Proprietary Account.

The Council feel full confidence that if that attachment to Science and Literature, in which this Society had its origin, remain in due force, every difficulty of this nature may gradually be surmounted; they are however convinced that for this end unceasing attention to the curtailment of every avoidable expence will be absolutely necessary. They therefore trust that those who may next be appointed to administer the affairs and watch over the interests of the Society, will suffer no specious advantages from alterations in the building, or opportunities, however tempting, of making additions, by purchase, to the collections in their possession, to induce them to increase the load of debt; persuaded that, with Societies, as with individuals, embarrassments of this sort, if suffered to go on unchecked, become fatal alike to energy of exertion and to respectability of character.

Of the Report as to the state of the Museum, the shells form a principal feature; they have been re-arranged and classed according to the system of Lamarck. The Quadrapeds and Birds are undergoing a revision; the scientific and popular names will be attached to each for the greater convenience of visitors; after which, a Systematic Catalogue will be prepared. In the execution, as far as it has proceeded, of this labo-

rious undertaking, as well as in the classification of the shells, the skill, attention, and diligence, of Mr. John Hey, Curator, and Mr. Henry Denny, Sub-curator, have been conspicuous.

From the objections urged in various quarters against a system of compulsory attendance by means of fines, many were induced, at an extraordinary General Meeting called for the purpose, on the 3d of December, to support a motion for their repeal, which was accordingly carried, and the attendance of the ordinary members is therefore now, as that of the Proprietary Members always has been, strictly voluntary. On the question, whether any benefits have arisen to the Society from this alteration, the Council hesitate to form an opinion; some of those members who spoke of giving up their tickets if the fines were continued, have nevertheless resigned, and the attendance has been more variable, and, on the whole, much smaller since the change. Considerations might be adduced on the other side of the question, and without deciding between these the Council trust that if longer trial should shew that the revival of fines would tend to the general benefit, the members will not suffer their supposed individual interests, to prevent the re-enactment of the law. Although, from the depressed state

of the funds, the Council have been unable to make any considerable purchases of specimens, they are happy to report that through the liberality of the members and friends of the Society, several valuable additions have been made to the Museum, during the past year, in the various departments of Natural History, especially in Ornithology. The Council would again call upon the activity of the members, especially those whose commercial pursuits connect them with foreign countries, to use their influence in procuring from such places, through their agents, some of the natural productions of foreign climes. It is by no means needful to search for the rarest or most splendid specimens, but to transmit generally whatever may offer. Collections in this manner might be formed at little or no pecuniary sacrifice to the parties themselves, while it would be conferring on the Society one of the greatest services. Any instructions respecting the modes of transmitting specimens, would be gladly given on application at the Hall. But while endeavouring to procure the products of other and more remote regions, the Council are not unmindful of those belonging to Britain, and especially to our own county, which they conceive of paramount importance, as the value of a British or local Fauna must be felt

and acknowledged by all lovers of science. Almost all of those specimens which form the pride of our Museum, have been donations, or the results of special subscriptions ; if unhappily the spirit which prompted these were to decay, no appropriation of income could supply its place ; but whilst the disposition to aid remains, opportunities will continually present themselves, the Museum will certainly, though it may be slowly, increase, and in this way, as well as by its contributions to science and to literature, the Society will advance in credit, in stability, and in usefulness.

Treasurer's Account.

LEEDS PHILOSOPHICAL AND LITERARY SOCIETY.

Disbursements,		£.	s.	d.
Balance due to Treasurer		30	17	11
Ditto	Sub-Curator	2	13	3½
To Mr. H. Denny		100	0	0
— Messrs. Kendell and Co.		100	0	0
— Insurance		11	15	0
— Tradesmen's Bills		19	8	1
— Books and Stationery		27	14	0
— Printing and Advertising		29	18	8
— Taxes		5	16	6
— Oil Gas		9	14	0
— Coals		8	6	0
— Purchase and Carriage of Specimens		9	17	4
— Sundry Expenses, Letters, &c. &c.		11	10	6½
— Interest due to Treasurer		2	19	5
— Cash in the Hands of the Sub-Curator		3	11	4

£374 2 1

Receipts.		£.	s.	d.
By Subscriptions of 121 Members		253	4	0
— Fines		42	15	0
— Arrears		11	9	0
— Subscription and Deposit for one New Member ..		5	5	0
— Sale of an Account of an Egyptian Mummy in the Museum of the Society		1	13	0

314 6 0

Balance

59 16 1

£314 0 0
274 2 7

Balance due to the Treasurer....£59. 16s. 1d.

DONATIONS

TO

THE SOCIETY'S MUSEUM.

*Those marked ‡ are Members of the Society, thus * Honorary Members.*

GEOLOGY AND MINERALOGY.

June, 1830.

Very select Specimens of Selenite upon Sulphur, from Alicata	} ‡ Mr. John Hey, <i>Curator.</i>
Fine Specimens of Native Sulphur, from ditto	
Stalactitic Sulphur, from the Lipari Islands	
Specimens of Coal and Amygdaloidal Ba- salt, and of the <i>Coke</i> in contact with the Basalt, from Coley Dike, North- umberland	

July.

2 Specimens of <i>Gryphea incurva</i>	Mr. Thomas Allis, York.
60 Minerals and Geological Specimens..	‡ Rev. Dr. Hutton.

September.

Specimen of Peacock Copper Ore, from Cornwall	} Miss Rhodes, Leeds.
Carbonate of Iron and Blende, upon Fluor Spar	
Vein Stone of Quartz covering Concretions of Skiddaw Slate.....	} Mr. Spark George.

October.

7 Species of Fossils, from the Folkstone	} * Mr. John Phillips, F.G.S. &c. York.
Blue Gault, viz.	
Ammonites Complanatus	
———— Auritus	
Nucula Ovata	
Hamites Intermedia	
Inoceramus Concentricus	
———— Sulcatus	} ‡ Mr. John Sangster. ‡ Mr. John Hey, Curator.
Belemnites Minimus	
Specimens of Copper Ore, from Snowdon	
Specimen of Hatchetine	

November.

Several Specimens of Volcanic Minerals and two Fossil Fish, from Italy	} Mr. John Wood, Leeds.
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January, 1831.

Specimen of Black Manganese, from Warwickshire	} ‡ Mr. John Lapage.
Very fine Specimen of Native Silver....	John Smith, Esq. Bowcliffe.

March.

Specimen of Scoria, from the Barnsley Coal Pits	} Mr. Foulis, Barnsley.
Specimens of Cannel Coal and a Mass of Ironstone, containing Unio subcon- strictus	} Leeds Coal Gas Company.

ZOOLOGY.*September, 1830.*

Skeleton of the Fallow Deer (Cervus Dama)	} ‡ Mr. John Hey, Curator.
--	----------------------------

November.

Grey Variety of the Hare (Lepus Timidus)	} ‡ George Banks, Esq.
Cream Coloured Variety of the Rat (Mus Decumanus)	} ‡ Mr. Thomas Motley.

January, 1831.

Stuffed Specimen of the Silky Monkey }
(Midas Rosalia) } ‡ Mr. John Lapage.

May, 1831.

Specimen of the Lapwing (*Tringa Vanellus*) } Mr. William Atkinson.

Portions of Nests of the Esculent Swallow }
(*Hirundo Esculenta*) from China.... } * Col. Smithson, Heath.

July.

Pair of Puffins (*Fratercula Arctica*) }
—— Razor Bills (*Alca Torda*)..... }
—— Kittiwake Gulls (*Rissa Brunnichii*) } ‡ Mr. John Peele Clapham
—— Foolish Guillemots (*Uria Troile*) }
Young Specimen of ditto

20 North American Birds, viz..... }

Pair of Summer Ducks (*Anas Sponsa*).. }

—— Surf Ducks (*Oidemia Perspicillata*) }

—— Wigeons (*Mareca Americana*).... }

Specimen of the Canvas Backed Duck }

(*Fuligula Vallisneria*)..... }

—— Ruddy Duck (*Rhynchaspis* ——) }

—— Velvet Duck (*Oidemia Fusca*) }

—— Buffleheaded Duck (*Clangula*

Albeola)

—— Longtailed Duck (*Harelda Gla-*

cialis)..... }

Peter Rhodes, Esq. and
Miss Rhodes.

Pair of Cedar Birds (*Bombycivora Caro-*

linensis)

—— Northern Colins (*Ortyx Borealis*) }

Specimen of the Umbellated Grouse }

(*Bonasa Umbellus*)..... }

—— Ground Dove (*Columba Passerina*) }

—— Redbreasted Thrush (*Turdus*

Migratorius)

—— Blue Robin (*Sylvia Sialis*) }

—— Mottled Owl (*Scops Asio*) }

Immature Specimen of the Foolish }
Guillemot (*Uria Troile*) } ‡ Mr. R. C. Battye.

October.

Spotted Gallinule (<i>Gallinula Porzana</i>) ..	} + Mr. Wm. Osburn, Jun. F.R.S.I.
Carrian Crow (<i>Corvus Corone</i>)	
Common Tern (<i>Sterna Hirundo</i>).....	Mr. Joseph Broadhead.
	Mr. J. Major, Knostrop:

November 6th.

Common Rotche, or }	(<i>Mergulus Mela-</i>	} + Mr. Benj. Jackson.
Little Awk	noleucus).....	
Arctic Gull (<i>Cataractes Parasiticus</i>)		
Common Scraber, or }	(<i>Cephus Grylle</i>)	
Greenland Dove, }		
from Melville Bay }		
13 Foreign Birds, including		
Piperine Aracari (<i>Pteroglossus Piperivorus</i>)		
Baillons Aracari (<i>Pteroglossus Bailloni</i>)..		
Redbreasted Cotinga (<i>Ampelis Scutata</i>) ..		
Whiskered Xenops (<i>Xenops Genibarbis</i>)		} + Mr. John Hey, <i>Curator</i> .
Golden Naped Woodpecker (<i>Picus Affinis</i>)..		
Leverian Shrike (<i>Bethylis Leverianus</i>)..		
Pair of Crested Wrynecks (<i>Yunx</i>		
<i>Cirrhatus</i>).....		
White and Green Kingfisher (<i>Alcedo</i>		
<i>Americana</i>)		
Swallowtailed Bee Eater (<i>Merops Taiva</i>)		
Kestrel (<i>Falco Tinnunculus</i>).....	Mr. H. Denny.	
Coot (<i>Fulica Atra</i>)	+ George Walker, Esq.	

January, 1831.

Nest of a Species of Oriole, from the	} + Mr. T. W. George.
West Indies.....	

March.

Water Rail (<i>Rallus Aquaticus</i>)	+ John Bischoff, Esq.
--	-----------------------

April.

The Eggs of 71 Species of British Birds..	} Mr. Abraham Clapham, Pot- ternewton.
Specimen of the Gadwall (<i>Anas Strepera</i>)	
	Mr. Thos. Allis, York.

June.

Specimen of Syngnathus Hippocampus } ‡ Mr. H. S. Smith.
 (Sea Horse)

October.

Specimen of the Spiny Shark (Squalus } ‡ Mr. John Atkinson, Jun.
 Spinusus) taken off Filey

This specimen I believe to be unique in this kingdom — *Cur.*

Sea Lamprey (Petromyzon Marinus).... ‡ Mr. John Hey, *Curator.*

July.

57 Specimens of Shells ‡ Mr. Benjamin Jackson.

Specimen of Patella Lucida and a Species } ‡ Mr. H. S. Smith.
 of Madrepore

4 Specimens of the Eatable Echinus } ‡ Wm. Gott, Esq.
 (Echinus Esculentus).....

Several Specimens of Terebella Conchilega. } ‡ Mr. John Hey, *Curator.*
 Solen Siliqua, and Helix Pomatia ..

Specimen of Turbo (——). Miss Bolland.

Specimens of the Silk-worm Moth (Bom- }
 byx Mori.) Cocoons of ditto } Mr. Joshua Muff.
 Specimens of Silk wound from the same, }
 shewing its variation of colours }

Specimen of the Glow-worm (Lampyrus } Mr. W. M. Stears
 Noctiluca)..... }

Blemus Unifasciatus and Epaphius Secalis } Rev. Saml. Hey, Ockbrooke,
 Derby.

Living Specimen of Scorpion taken from }
 a Log of Campeachy Logwood, and } Mr. Beverley Hill.
 two Ants

Pair of Bombyx Hebe, from Germany .. Mr. H. Denny.

MISCELLANEOUS DONATIONS.

June, 1830.

An Indian Fish-hook Lieut. Bance, R. N.

*July.*Staff of a New Zealand Chief, bearing the
Markings of his Rank } ‡ Mr. Benjamin Jackson.*September.*Portion of the Consecrated Wafer used
by the Jews at Jerusalem..... } Miss E. Atkinson.Portion of Roman Pavement from a Bath
near Huddersfield } • Dr. Walker, Huddersfield.Silver Coin of Hadrian, found near Bew-
castle; and four Russian Coins, viz.
a Four Copeck, Two Copeck, and two
One Copeck Pieces..... } ‡ Mr. Robert Perring.Cloak of an Esquimaux Chief, from a
Moravian Settlement at Esquimaux
Bay } Jas. Wilkinson, Esq. London.

Copy of the Cairo Gazette..... Thomas Bischoff, Esq.

Specimen of Cassada Bread from the West
Indies; and of the Unleavened Bread
of the Jews } Mr. John Murray. F.S.A. &c.

DONATIONS TO THE LIBRARY.

*May, 1830.*Smith's Sketch of a Tour on the Continent
in 1807. 3 vols. 8vo. } ‡ Mr. H. S. Smith.On the Moral Influence of Free Trade,
and its Effects on the Prosperity of
Nations. By Edward Baines, Jun. } ‡ Presented by the Author.

- An Essay on the Round Towers of Churches in Norfolk. (From the Archeologia). . . } Mr. Samuel Woodward,
H.M.Y.P.S. the Author.
- The Law of Population. 2 vols. 8vo. 1830. } M. T. Sadler, Esq. M. P.
President of the Society.
The Author.
- Memoranda relating to Coloepteros In- }
sects found in the Neighbourhood of }
Swansea. Royal 8vo. (not published) } L. W. Dillwyn, Esq. F.L.S.
the Author.
- A Memoir on the Diamond, 12mo. By }
John Murray, F.S.A. &c. &c. }
An Invention of an effective and unfailing }
Method for forming an Instantaneous } The Author.
Communication with the Shore in }
case of Shipwreck. By John Murray, }
F.S.A. &c. &c. }

July.

- List of Premiums offered by the Society }
for the Encouragement of Arts, Ma- }
nufactures, and Commerce, for 1830, } The Society of Arts.
31, and 32. }

September.

- Description of the Residence of John }
Soane, Esq. Architect, with some }
General Remarks on the State of }
Architecture in England in the 19th } John Soane, Esq. the Author
Century. 4to. (not published.) Lon- }
don, 1830. }

October.

- Catalogue of the Norfolk and Norwich }
Museum. Part I. containing Coins, } The Committee of the Nor-
Antiquities, &c. } folk and Norwich Museum.

- 3 Plates of Fossil Fish from the Geological Transactions
- Sur les Dépôts Lacustres Tertiaires du Cantal et leurs Rapports avec les Roches Primordiales et Volcaniques. Par M. Charles Lyell. et M. R. I. Murchison
- "On the Bituminous Schist, and Fossil Fish of Seefeld in Tyrol. By R. I. Murchison, Esq. &c.
- "On the Excavation of Valleys as illustrated by the Volcanic Rocks of Central France. By Chas. Lyell, Esq. and R. I. Murchison, Esq.....
- "On the Tertiary Fresh Water Formations of Aix in Provence, &c. By R. I. Murchison, Esq. and Chas. Lyell, Esq.
- Report of the Scarbro' Philosophical and Literary Society.....
- Folio Edition of Bishop Hall's Works. London, 1634; and the Paraphrase of Erasmus on the Epistles. Folio. Found mortar'd up in an inner wall of a farm house belonging to the Marchioness of Hertford, called Coldcoates, in the Parish of Whitkirk.
- Seventh Annual Report of the Bristol Institution and Philosophical and Literary Society.....
- R. I. Murchison, Esq. F.R.S.
President of the Geological Society.
- Scarbro' Philosophical and Literary Society.
- Taylor, Esq. Temple Newsam.
- The Bristol Institution.

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THE LEEDS

PHILOSOPHICAL AND LITERARY SOCIETY'S

TWELFTH REPORT.

TWELFTH REPORT

OF THE

COUNCIL

OF THE

Leeds Philosophical and Literary Society,

AT THE

CLOSE OF THE SESSION,

1831-2.

LEEDS:

PRINTED BY JOHN HEATON, 7, BRIGGATE.

MDCCCXXXII.



REPORT OF THE COUNCIL,

AT THE

CLOSE OF THE TWELFTH SESSION.

IN presenting the Twelfth Annual Report of the LEEDS PHILOSOPHICAL AND LITERARY SOCIETY, the Council have little to communicate to the Society at large, beyond the ordinary details of business, and some remarks naturally suggested by the fluctuations to which all Institutions are liable.

By a reference to the annexed Account, it will be seen that the state of your Finances, as compared with the year immediately preceding, is apparently favourable, the excess of income above expenditure being sufficient to leave a trifling balance in the hands of the Treasurer; the Council, however, have to regret that they have not, in the present year, been able to effect any reduction in the debt of the Society, the total amount of which is—£442. 4s. 5d.

On the Proprietary Account,	£227	8	0
Messrs. Kendell & Co. for Cases, &c.	204	11	11
Interest to ditto,	10	4	6

Total,	£442	4	5
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It appears from this statement, that even under favourable circumstances, it is not without the most rigid economy that the income of the Society can be made to satisfy its ordinary expenditure—an economy involving the almost total suppression of one important organ of interest and utility—the assistance of Professional Lecturers; whilst the Museum and Library receive few additions, save from the gratuitous contributions of the friends of Science. With a view to remove the dead weight with which a considerable debt always presses on Societies like this, and to restore to the Members the full benefits contemplated by the Founders of the Institution, the Council cannot retire from office without endeavouring to impress upon the Members generally, and upon the succeeding Council in particular, the expediency of taking into consideration the best mode of applying the resources of the Society to the liquidation of its debt, whether chargeable on the ordinary or the proprietary fund. The time has been, when an appeal was never made in vain to the zeal of such Members as were able to testify it by effectual assistance, and when the Society was under no necessity of looking beyond its own ranks for a copious supply of interesting and important Lectures; and it cannot be conceived, that with the love of science and the intellectual advancement of the present day, those resources should now be found insufficient. It must be borne in mind that the debt, which is now of long standing, does not appear to have been the result of any prodigality or needless expenditure on the part of any preceding Officers of the

Institution, since more than one half of it arises from a deficiency in the Proprietary Account, produced by the non-appropriation of two shares, whilst the residue is the balance of Mr. Kendell's bill for the indispensable furniture of the Museum: and on taking an account of the whole number of Members, it is consolatory to perceive that a voluntary contribution of no very great average amount would not only relieve the Society from the pressure of its debt, without anticipating its resources by the creation of proprietary shares, but would supply the means of prosecuting the objects of the Institution in all its branches, with that renewed vigour which will be the most likely source of increased prosperity, by augmenting its interest, and extending its utility.

There is another subject of some little importance, to which we think it proper to call the attention of the Society, particularly of the Proprietary Members: though at the time when the Site of the Buildings was purchased, it was regularly conveyed to Trustees, there has not yet been any Deed to declare the trusts thereof. The subject was brought before the retiring Council at too late a period of the Session for them to bring the matter to a close; the original Draft will be laid before the Gentlemen who shall be elected the Officers of the Institution for the ensuing year, and as the various dispositions of property by alienation, devise, or descent, cause the technical difficulties to increase with the lapse of time, it seems to be expedient to use all convenient dispatch in completing the necessary arrangements.

It now remains for the Council to congratulate the Society on the pleasing fact, that notwithstanding the unfavourable circumstances which they have felt it their duty to put forwards in a prominent part of the Report, there has throughout the Session, appeared to be a marked improvement in the present operation and future prospects of the Institution. There has been an accession of new Members which, though of course not so considerable as at some earlier periods, has been more than sufficient to supply the vacancies which have occurred from resignations or other causes; and the attendance at the Ordinary Meetings has been frequently numerous and invariably respectable, so as to afford flattering indications of an increased and increasing taste for scientific and literary disquisition.

The Museum has continued to receive much improvement from the judicious attention of the Gentlemen in whose department it more peculiarly lies, to its satisfactory classification and arrangement, in respect of which it holds a distinguished rank among provincial Institutions. In the course of the year, it has been enriched by the valuable donation of an important Collection of Articles from the South Sea Islands, illustrating both their Natural History, and the social habits of the Inhabitants, which has been presented by George Bennet, Esq. of London, a gentleman whose name the Society has this year had the satisfaction of enrolling among those of its Honorary Members. In addition to which, the Catalogue of Donations contains an enumeration of many valuable presents, announced during the Session, which respectively claim our grateful acknowledgments.

The subjects of the Papers read before the Society, during the Session, have been—

1. "On Vapours"—by William Hey, Esq. the President—(read October 21st, 1831.)
2. "On Ceremonial Magic"—by Mr. William Osburn, Jun. Vice-President—(read November 4th, 1831.)
3. "On the Natural History, Devastations, and Uses of Locusts"—by Mr. Henry Denny, Sub-Curator—(read Nov. 18th, 1831.)
4. "A Phrenological Analysis of the Theory of Dreams, Spectral Illusions, and some of the more usual Phenomena of Mental Derangement"—by Dr. Alexander, of Wakefield—(read December 2nd, 1831.)
5. "On the Improved Means afforded by the Progress of Knowledge, of Elucidating the History of the past, and on the Importance of such Elucidation in reference to the future Prospects of Society," Part I.—by the Rev. —. Taylor, of Manchester—(read December 16th, 1831.)
6. "On the Distribution of Animals over the Surface of the Globe"—by Richard Matthews, Esq. Barrister-at-Law—(read January 6th, 1832.)
7. The conclusion of the Rev. Mr. Taylor's Paper—(read January 20th, 1832.)
8. "On Presentiments and First Impressions"—by Mr. Robert Baker—(read February 3rd, 1832.)
9. "On several of the Incidents of Vitality, including Suspended Animation and Spontaneous Combustion"—by Mr. William Wildsmith—(read February 17th, 1832.)
10. "On the Comparative Beauties of Grecian and Gothic Architecture"—by Mr. Christopher Kemplay—(read March 2nd, 1832.)
11. "On Poetry—the Early English Poets"—by Mr. Robert Perring—(read March 16th, 1832.)
12. "On the Philosophical Opinions of Bishop Berkeley, and especially on the Non-existence of a Material World"—by Mr. John Wilkinson, Commercial-Street—(read April 6th, 1832.)
13. "On the Origin and Progress of the Ascetic Life, and of its Effects upon the Social System of Europe"—by Mr. George Waring—(read April 27th, 1832.)

From this enumeration, it appears that the Session, now at its close, is second to no one preceding it, in the importance and variety of the subjects which have been brought before the Society at its Ordinary Meetings; and it is very gratifying to observe the large proportion of Papers furnished by new Members, so as to compensate for the temporary abstraction of professional talent, which has been occasioned by the recent establishment of a Medical School in this town, an event in itself the subject of much satisfaction, and the source of many pleasing anticipations to the promoters of philosophical inquiry. The discussions also have, in many instances, been highly creditable; and on these points the Society has little to regret, save the almost total absence of Experimental Papers, which are not indeed so generally interesting as some others, but are of great importance, both for their intrinsic value, and for habituating the observer to the processes of scientific investigation.

It is, therefore, not without a confident expectation that this Institution will continue steadily to assist in the cultivation of science, and to exert its genial and softening influences on the general condition of society, that the Council cheerfully resign the administration of your affairs to those who will this day be elected their successors. And as a parting subject of congratulation, they would call your attention to the British Association for the advancement of Science, a Society which was formed shortly before the commencement of the Session, under the most favourable auspices, and which, from the facilities afforded by its

constitution, will, for all practical purposes, unite the various local institutions into one vigorous and luxuriant whole,—

Branching so broad along, that in the ground,
The bending twigs take root, and daughters grow
About the mother tree,

and thus promises to support the reputation, and enlarge the limits of British Science, by increasing the advantages of extended diffusion and concentrated exertion.

Treasurer's Statement.

LEEDS PHILOSOPHICAL AND LITERARY SOCIETY.

DISBURSEMENTS.		RECEIPTS.	
£.	s. d.	£.	s. d.
Balance due to the Treasurer,	59 16 1	Subscriptions, 112 Members,	235 4 0
To Mr. Denny (Five Quarters' Salary)	125 0 0	Fines,	17 19 0
Insurance,	11 15 0	Arrears,	6 16 0
Tradesmen and Solicitor's Bills,	32 11 9	Subscriptions and Deposits of Six New Mem- bers,	31 10 0
Books and Stationery,	30 16 6	Rent of Cellars,	25 0 0
Printing and Advertising,	9 17 6	Use of Hall,	13 14 6
Taxes,	5 5 9	Sale of an Account of an Egyptian Mummy in the Museum of the Society,	0 11 0
Coal Gas,	8 19 0		
Coals,	9 2 0		
Purchase and Carriage of Specimens,	1 13 2		
Sundries, Letters, &c.	5 9 11		
Interest to Treasurer,	3 7 0		
Cash in Hands of Sub-Curator,	2 12 0		
Repairs,	2 2 0		
£308 7 8		£330 14 6	

Balance in the Hands of the Treasurer, £22. 6s. 10d.

DONATIONS

TO

THE SOCIETY'S MUSEUM.

*Those marked ‡ are Members of the Society—thus * Honorary Members.*

GEOLOGY AND MINERALOGY.

June, 1831.

- | | |
|---|--|
| Section of Fossil Wood, ground down,
showing the Structure | } Henry Witham, Esq. F. G. S.
&c. Lartington. |
| Ten very fine Fossils from the Chalk
of Warminster | } Thomas Meade, Esq. Chatley. |

July.

- | | |
|--|---------------------------|
| Fine Specimen of Sternbergia Trans-
versa, from Bramley-Fall | } ‡ Mr. Benjamin Jackson. |
| Specimen of Phytolithus, found in ex-
cavating York-Street, Leeds | } Leeds Coal Gas Company. |

November.

- | | |
|--|-----------------------------------|
| Specimen of Trilobite, from the Dud-
ley Limestone | } ‡ Mr. John Hey, <i>Curator.</i> |
| Five Masses of Dudley Limestone,
containing fine Specimens of Trilo-
bites, Encrinital Stems, &c.. | } ‡ John Peele Clapham, Esq. |

February, 1832.

- | | |
|--|-------------------------|
| Specimen of Peacock Copper Ore,
with Blende Quartz Mundic Lead,
and Iron Pyrites, from Cornwall... | } Mr. Tregallas, Truro. |
| Two Fine Specimens of Fossil Plants,
from the Quarries at Bramley-Fall. | } ‡ Mr. Sparke George. |
| A Mass of Breccia, from the Site of
the Slaithwaite Baths | } Mr. Varley. |

April.

- | | |
|-------------------------------|------------------------|
| Specimen of Fossil Wood | Mr. John Kendell, Jun. |
|-------------------------------|------------------------|

Female Pencilled Pheasant (<i>Phasianus Nycthemerus</i>)	} Mr. Hepworth, Leeds.
Cormorant (<i>Phalacrocorax Carbo</i>) ...	
Egg of the Ostrich (<i>Struthio Camelus</i>)	} Mr. Abraham Clapham, Potternewton.
Living Specimen of the Virginian Opossum (<i>Didelphis Virginiana</i> .)	
	} John Gravely, Esq. Halton, near Leeds.

Several Eggs of British Birds..... Lieut. Wm. Waite.

Female Eider Duck (<i>Somateria Mol-</i> <i>lissima</i>) from Greenland	} Mr. Fielding.
Pair of the Golden Crested Wren (<i>Regulus Cristatus</i>)	
	} Lieut. Wm. Waite.

Immature Specimens of the Foolish	} † John Peele Clapham, Esq.
Guillemot (<i>Uria Troile</i>) and Razor	
Bill (<i>Alca Torda</i>)	
Skull of the Porpesse (<i>Delphinus</i>	} Mr. Wm. Waite.
<i>Phocæna</i>).....	

Bengal Roller (*Coracias Bengalensis*) }
 Indian Grackle (*Gracula Religiosa*) } ‡ Mr. John Hey, *Curator*.
 Thirteen Specimens of Foreign Birds, }
 including, }
 Rhamphastos Toco (Toco Toucan)... }
 Pair of Paradise Flycatchers (*Muscicap*
capa Paradisii)..... }
 Pair of the Malabar Dicrurus (*Dicru*
rus Malabaricus) } ‡ John Gott, Esq.
 Green Barbet (*Bucco Viridis*)..... }
 Crested Cassique (*Cassicus Cristatus*) }
 Manakin, Grosbeak, Flycatcher, &c. }

Fine Male Eider Duck (*Somateria*
Mollissima), Common Scraber or } ‡ T. B. Pease, Esq. Chapel-Al-
 Greenland Dove (*Cephus Grylle*), } lerton.
 and Skua Gull (*Cataractes Vulgaris*) }

Stormy Petrel (*Procellaria Pelagica*) Purchased by the Society.

Specimens of the Scoter Duck (*Anas*
Nigra) } Purchased by the Society.
 Shoveller Duck (*Spathulea Clypeata*) }
 and Gadwall Duck (*Anas Strepera*)... }

April, 1832.

Blue Titmouse (*Parus Cæruleus*) ... }
 Great Titmouse (*Parus Major*) } ‡ Mr. John Heaton.
 Reed Bunting (*Emberiza Shœniclus*) }

Eggs of the Swan, Coot, Quail, } ‡ George Walker, Esq. Killing-
 Grouse, and Carrion Crow } beck-Lodge.

Flying Fish (*Exocetus Volitans*)..... Mr. Wm. Waite.

June.

Pair of *Saperda Ferrea* } Rev. Samuel Hey, Ockbrooke,
 Derby.

Specimens of the Larvæ of *Æstrus*
Bovinus (Ox Gad Fly) } Mr. Wm. Trant.

Several British Insects Mr. Abraham Clapham.

Several British Insects ‡ Mr. John Smallpage.

Salpingus Ruficollis, *Clivina Collaris*,
Chrysomela Varians, *Orchestes Ilicis*, } Rev. Samuel Hey, Ockbrooke,
Cryptophagus Caricis (*Cryptophagus* } Derby.
Typhæ) *Rhyzobius Litura* }

Hermit Crab (*Pagurus Bernhardus*) Mr. Wm. Waite.

Specimens of *Larunda Ceti* (Vulgo
 Whales Louse), and a Species of } Mr. Fielding.
Larunda from the Narwhal..... }

Thirty-two Specimens of Shells from
 the South-Sea Islands }
 Two Specimens of *Echinus Mammil-* } George Bennet, Esq. London.
latus, and one of *Spatangus Ventri-* }
cosus }

Three Specimens of Madrepora Fun-	}	George Bennet, Esq. London.
gites, and one of Madrepora Cris-		
tata		
Specimens of Madrepora Clivosa from	}	Purchased by the Society.
the Bermudas		
Cidaris Papillata		* Mr. H. Denny.

BOTANY.

June, 1831.

338 Species of Plants, collected in	}	‡ Mr. T. P. Teale.
Scotland		
Forty Species of scarce British Plants		‡ Mr. John Hey, <i>Curator</i> .

MISCELLANEOUS DONATIONS.

June, 1831.

Two Silver Roman Coins, found in a	}	I. R. W. Atkinson, Esq. Elm-
Field near the Giants' Causeway,		
Ireland.		
An Andrew Ferrara, or Highland	}	Rev. George Wray.
Broad-sword, Powder Flask, and		
a Cannon Ball from the Field of		
Culloden		
Two Musket Balls from the Field of	}	Master Hare.
Marston Moor		
Fan made of Feathers, from Singa-	}	Mr. Edgar.
pore; Fish-Hooks, Line, &c. from		
Pelew Penang		
Four Russian Copper Coins, and an	}	‡ Mr. Sparke George.
ancient Brass Seal		
A Silver Coin of Elizabeth.....		Mrs. Charlesworth.

January, 1832.

Native Cloth, made of the Inner Bark
of a Tree from *Rurutu*
Tahitian Mat of Rush, laid on the
Floors of Chiefs' Houses.....
Native Cloth from *Atu*
Tahitian Cloth, made of the Inner
Bark of the Bread Fruit Tree.....
Figured Native Cloth, used for a sort
of Turban in *Mauti*
Tahitian Basket made of Rush; and a
Sling made of Cocoa-nut Husk Fibre.
A Beater or Pestle, of Basalt, for
bruising Cocoa-nuts, Bananas, &c.
Four Stone Adzes; a Head of ditto...
An Instrument for splitting Bread-
fruit, made of *Ati* Wood
Two Vivos, or Nasal Flutes
A Joint of Bamboo used as a Water
Vessel
Two Iron-wood Beetles, or Beaters,
used by the Females in making the
Cloth of Bark
Fish Skin File.....
Head of War-spear of Iron-wood ...
Head of War-spear of Sperm-whale's
Jawbone
Wooden Tahitian Pillow.....
Poe, or Carved Pudding-dish from
Raiva-voi
Pair of Sacred Drum-sticks.....
Fishing-net
Tahitian Idol, found in the Mountains
Wooden Female Idol, from *Mauti* ...
A Tahitian Idol (*Varua-ino—Evil
Spirit*) formerly regarded as a pro-
found object of worship

George Bennet, Esq. London,
by John Peele Clapham, Esq.

Wooden Instrument used by the
 Aborigines of New Holland, to as-
 sist in throwing their Spears
 Three Arrows from *Tahiti*
 Two Royal Paddles from *Raivavoi*...
 Royal Mantle from *Huahine*, made
 by Hautia Vahini, the Regent's
 Wife
 Tahitian Native Cloth.....
 Tahitian War Cap, worn only by the
 Great Chiefs
 Sacred Fan
 A Female Chief's Ornament for the
 Head
 Two Nets for suspending Property in
 the House
 A Warrior's Mantle.....
 A Girdle of Cocoa-nut Husk Fibre...
 A Brown Wrapabout for the Loins...
 Native Hair Platted
 A Gourd used as an Oil Vessel
 A Cocoa-nut Shell Drinking Vessel...
 Needle used in Thatching
 Truncheon used formerly in dancing
 the *Heva*.....
 Necklace with Ornaments worn by
 Chief Females.....
 Mother of Pearl Fish Hooks, with
 Lines
 Necklace of Human Hair, with Pearl
 Shell Ornaments, worn by Female
 Chiefs at *Rarutu*.....
 Cord or Cinch, used for sewing toge-
 ther their Canoes.....
 Round Stone, formerly used by
 Chiefs in hurling on the Water at
 Objects

George Bennet, Esq. London,
 by John Peele Clapham, Esq.

DONATIONS TO THE LIBRARY.

June, 1831.

- | | | |
|---|---|-------------------------------------|
| Observations on Fossil Vegetables,
accompanied by Representations of
their Internal Structure, as seen
through the Microscope.—4to..... | } | Henry Witham, Esq. Larting-
ton. |
| Annual Report of the Yorkshire Phi-
losophical Society for 1831: List
of Members and Contributors to
the Building Fund of the York-
shire Philosophical Society | | } |

Sept. 1831.

- | | |
|--|--|
| <p>A Flora of Berwick-upon-Tweed, by
George Johnston, M.D.—2 vols.
12mo. Edinburgh, 1831</p> | <p>} Presented by the Author.</p> |
| <p>Proceedings of the Fortnight Meet-
ings of the Geological Society of
London</p> | |
| <p>Annual Report of the Geological So-
ciety for 1830: together with the
Address delivered by the Rev.
Professor Sedgwick, M.A. F.R.S.
&c. on retiring from the President's
Chair, Feb. 18, 1831</p> | <p>} The Geological Society of Lon-
don.</p> |

November.

- | | |
|---|--|
| Histoire Naturelle des Animaux sans Vertebres, par M. le Chevalier de Lamarck.—7 vols. 8vo. Paris | } ‡ Wm. Gott, Esq. |
| | |
| Transactions of the Royal Society of Edinburgh, vol. 11. pt. 2..... | } The Royal Society of Edinbro'. |
| | |
| Memoirs of the Literary and Philosophical Society of Manchester, vol. 5. | } The Manchester Literary and Philosophical Society. |
| | |
| An Estimate of the Philosophical Character of Dr. Priestley, by Wm. Henry, M.D. F.R.S. &c. | } Presented by the Author. |
| | |

Experiments on the Disinfecting
 Power of increased Temperature,
 by Wm. Henry, M.D. F.R.S., &c. } Presented by the Author.
 Further Experiments on the same
 Subject, by the same Author }

March, 1832.

Report of the Scarbro' Philosophical
 Society for 1831 } Scarbro' Philosophical Society.
 First Report of the British Associa-
 tion for the Advancement of Science, } Yorkshire Philosophical Society.
 1832 }

Lepidoptera Diurna, or the British
 Butterflies, arranged after the Mo-
 dern System, with Coloured Plates, } Presented by the Author.
 by Frederick Waite, Part I. 4to. }
 1832 }

LIST OF OFFICERS, COUNCIL, AND MEMBERS.

OFFICERS.

President.....	William Hey.
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	{ Rev. Joseph Hutton, LL.D.
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Sub-Curator.....	Henry Denny.

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Edwin Birchall,	John Peele Clapham,
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Thomas Blayds,	Thomas Clapham, <i>Potter-Newton</i> ,
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 Christopher Kemplay,
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 Richard Driver,
 Josiah Davy,
 Albert Davy,
 Edwin Eddison,
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 Thomas England,
 James Fenton,
 J. P. Garlick,
 Wm. George,
 Sparke George,
 Edward Halliley,

Robert Hall, A.M.
 Rev. R. W. Hamilton,
 Samuel Hare,
 Christopher Heaps,
 John Heaton,
 John Heaton, *Briggate*,
 James Hebden,
 Thomas Hebden,
 William Hey, Jun.
 John Hey,
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 Adam Hunter, M.D.
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 John Kendell,
 Caleb E. Langdon,
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 J. W. Leather,
 Charles Lee,
 James E. Liebrich,
 Jonathan Lupton,
 T. T. Luccock,
 Chas. G. Maclea,
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 William Shaw,
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 Robert Taylor,
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 Charles Waterton, Hon. Member of the Yorkshire Philosophical Society and Bristol Institution, *Walton-Hall*.
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 Rev. G. Young, A.M. M.W.S. Honorary Member of the Newcastle, Yorkshire, and Hull Philosophical Societies, *Whitby*.

THIRTEENTH REPORT

OF THE

COUNCIL

OF THE

Leeds Philosophical and Literary Society,

AT THE

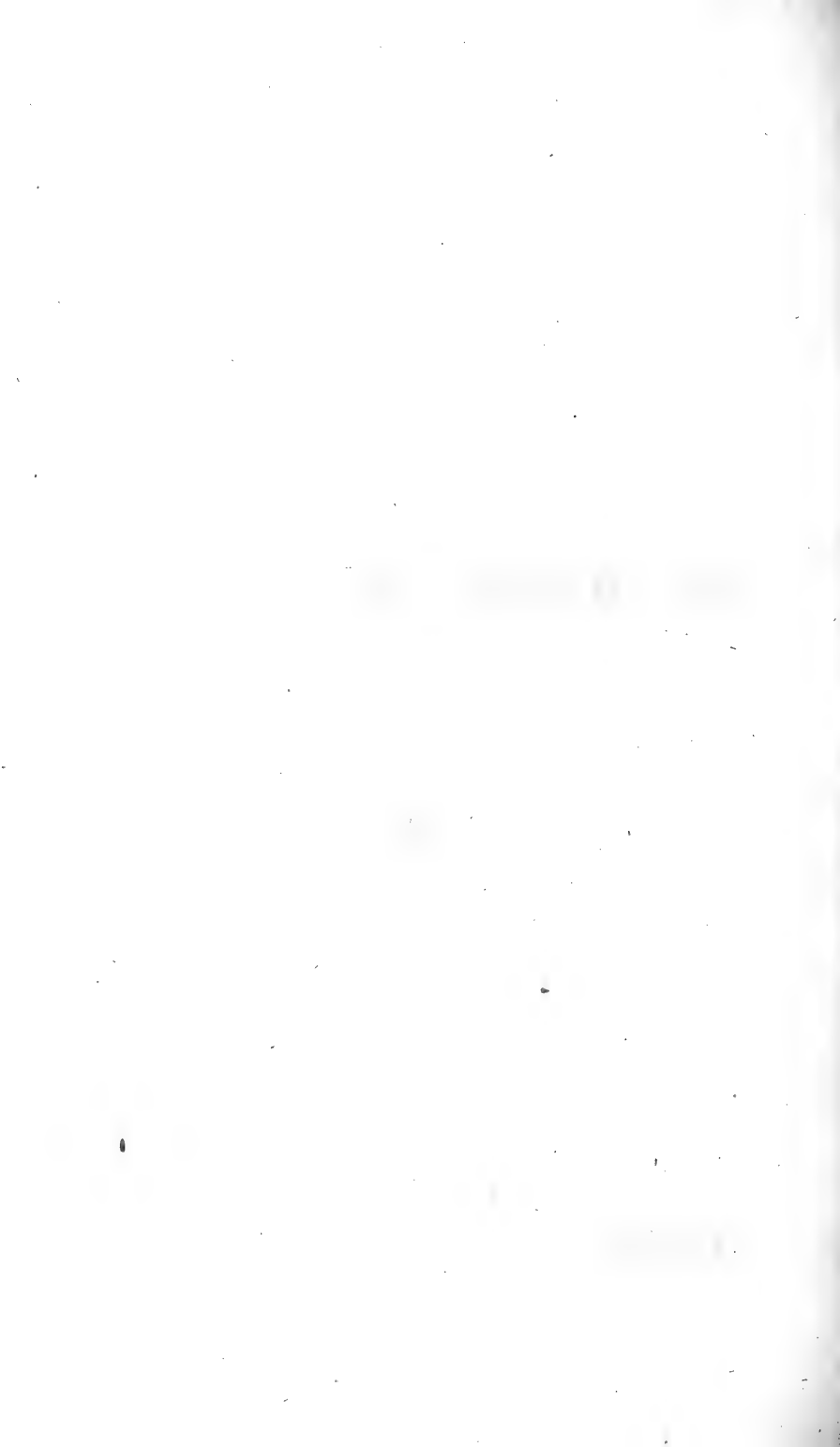
CLOSE OF THE SESSION,

1832-3.

LEEDS:

PRINTED BY EDWARD BAINES AND SON.

—
MDCCCXXXIII.



REPORT OF THE COUNCIL,

AT THE

CLOSE OF THE THIRTEENTH SESSION.

IN bringing up the Annual Report of the LEEDS PHILOSOPHICAL AND LITERARY SOCIETY, which has now arrived at the close of its Thirteenth Session, the Council, whose duties terminate with the present meeting, have to congratulate the society at large on the continuing prosperity of the Institution, and on some indications of public interest in scientific subjects which afford reasonable hopes of future improvement.

The state of the finances, as exhibited on the Treasurer's accounts, shows indeed an apparent excess of £32 19s. 0d. in the expenditure over the receipts, but since that is occasioned by our having been enabled to pay off £100 of the debt on the ordinary account, there has been a real excess on the income over the disbursements of upwards of forty pounds. The result is the more gratifying when we remember that the retiring Council have ventured to indulge in a more liberal expenditure than some of their immediate predecessors thought it safe to adopt; and the fact that the receipts for the lectures have amounted to a large proportion of the sums expended on them is one of the most encouraging features of the session.

The Museum, though donations are not so numerous as when the claims of the society were recommended by their novelty, and there were fewer neighbouring associations to divide the attention of the public, has, nevertheless, received many important additions, affording satisfactory evidence of the lively interest which the supporters of the institution continue to take in its success. The principal additions, of which the Council feel called upon to make more especial mention, are the two Alligators (*Lacerta Lucius*), one of which is ten feet long, the Racoon and three Snakes, from America, by JOHN GRAVELY, Esq., of Halton; a fine specimen of the Albatros (*Diomedea Exulans*), by Mr. GEO. MORLEY; several impressions of ancient seals and casts of rare British Asteriæ, by Mr. SAMUEL WOODWARD, a gentleman to whom the society have been many times indebted for donations; a collection, consisting of 256 British and Foreign Insects, by Mr. ABRAHAM CLAPHAM; and a collection of Fossil Shells, from the Paris Basin, in a high state of preservation, which, together with some Birds of rarity, have been purchased by the society. An inspection of the enumeration appended to the report will show that many of the additions are very important, as illustrative of particular groups, and supplying many connecting links, the value of which those who are engaged in the study of Natural History can appreciate more easily than they can describe. In the collection of Insects many additions have been made by the kindness of distant friends; and the arrangement of the Shells, according to the system of LAMARCK, has been completed as far as practicable, but the Council

have still to regret that too many genera are wanting in this department to make it adequate to its principal purpose, that of assisting those who pursue the study of Conchology.

The Herbarium has received considerable accessions of native plants, and the British Collection is now divided and arranged in several volumes, so as to illustrate the respective systems of LINNÆUS and JUSSIEU; by which means the botanical student will be greatly assisted in the prosecution of his labours; there are, however, many genera and species of which specimens are still wanting. In this, therefore, as in every other department, the Council earnestly solicit the continued exertions of the members, since by such means alone can the Museum be made to keep pace with the continuing progress of physical science, and prove to all observers that, as in former ages, and in other countries, so at the present day, and in this town, the fostering hand of commerce is the steady and generous promoter of Philosophy and Literature.

The Library of the Institution has received a pleasing addition in the prose works of a distinguished ornament of our Literature, recently deceased, which have been presented by Dr. DISNEY L. THORP, and the new edition of the Treatise on the Climate of London, in 3 vols. 8vo., by its Author, LUKE HOWARD, Esq. F.R.S.; in most other respects its history presents the same blank which has characterised it in so many of our Annual Reports.

In the course of the session two highly interesting courses of lectures have been delivered, the first by

Mr. ATHERSTONE, on Poetry ; the last by Mr. ADDAMS, on Acoustics. The attendance on each of them was very gratifying, particularly when compared with the very thin attendance in former years on lectures delivered by gentlemen of considerable eminence. The hopes which the Council entertained of the production of at least one course of lectures by the native talent of the Society, have been disappointed, for the present session ; they have, however, much pleasure in acknowledging the readiness of gentlemen in providing papers for the ordinary meetings of the Society. In the following enumeration it is gratifying to observe that the communications by new Members have not fallen short of the usual proportion.

The papers read before the Society have been—

1. "On Vapours," by William Hey, Esq. President—(read October 19th, 1832.)
2. "On the Happiness of Man, as depending on the proper adjustment of his Mental and Bodily Powers," by Dr. Disney Launder Thorp—(read November 2nd, 1832.)
3. "On Home Colonization," by Mr. William Atkinson—(read November 16th, 1832.)
4. "On the Uses of Gelatine, as applied to Human Sustenance," by Sir John Byerley, of London—(read December 7th, 1832.)
5. "Miscellaneous Chemical Observations, with Experiments," by Mr. William West, Secretary—(read December 21st, 1832.)
6. "On the Influence of the Extension and Improvement of Machinery, particularly with reference to its Effects on the Wages of Labour, and the Condition of the Lower Classes," by Mr. John Arthur Ikin, Solicitor—(read January 4th, 1833.)

7. "On Perpetual Motion, the Transmutation of Metals, and the Royal Road to Learning," by Mr. Christopher Kemplay—(read January 18th, 1833.)
8. "On the Intellectual Capacity of the Negro," by Mr. William West, Secretary—(read February 1st, 1833.)
9. "On the Yorkshire Dialect," by the Rev. R. W. Hamilton, Vice President—(read February 15th, 1833.)
10. "On Credulity," by Dr. Hunter—(read March 1st, 1833.)
11. "Observations on the Cause and Increase of Crime, with Suggestions for an Alteration in the Laws respecting Prison Discipline and Colonial Transportation," by Mr. Edwin Eddison, Solicitor—(read March 15th, 1833.)
12. "The Union of Literature with the Pursuits of Commerce, as exemplified in the Life and Character of the late Mr. Roscoe," by Mr. Hartley Coleridge—(read March 29th, 1833.)
13. "On the History of Penal Institutions, as illustrated by the Criminal Law of Rome," by Robert Hall, Esq. Barrister-at-Law, Secretary—(read April 19th, 1833.)

It cannot fail to be remarked that the deficiency in papers on physical and experimental subjects, which was noticed in the last Report, and which appears very striking on comparison with the transactions of other Institutions, is still a characteristic feature in the proceedings of this Institution. This, probably, is the natural result of some peculiarity in the constitution or management of the Society; but to whatever cause it may be attributable, it is a circumstance which, added to a desire to give increased efficiency to the discussions, has caused some of the oldest and most zealous supporters of the Institution to devise plans for so arranging the delivery of papers, that the labourers in the field of minute investigation may have opportunities of laying before the Society the result of their studies, in

that greater privacy which their less popular character would seem to court. It is, however, hoped, that there would be but little necessity for this, if students would but dismiss their apprehensions of being thought tedious; there are doubtless many important inquiries, which, like the lays of the Theban bard, are dull enough to those who are not inspired with a love of the subject; but if they be uninviting to the general taste, it is in most instances only because they are so seldom brought under the general view. Science, in all her various forms, requires only to be seen to be admired.

In some of the metropolitan Institutions, a system of *Conversazioni* has been adopted with considerable success, and certainly offers a less formal mode of communicating many particulars of interest, than is afforded by the more stately solemnities of a regular essay. A plan of this nature has met with a favourable reception from the retiring Council, and will probably be immediately submitted to the consideration of their successors in office. If it be done, it is expedient that it be well done; it is, therefore, a subject well deserving the attention of the Society at large.

The recent change in the law respecting Elections having removed all restrictions on the eligibility of retiring Officers, the Members will nevertheless have that due regard to a proper and sufficient circulation of office, which is conducive to the healthy state of all institutions, and which was the object of the supporters of the repealed law. The Secretaries will lay before the Society a return of the respective attendances of the several Members of the retiring Council,

who have, by the voluntary imposition of a fine, secured a fuller attendance than has been usual during many preceding Sessions.

That some of the prospects of liquidating the debt on the ordinary account and other improvements which were held out in the last annual report have not been fulfilled in the course of the Session, is probably to be attributed to the engrossing nature of certain extraneous pursuits, which during the last year have occupied the attention of many Members of the Society. That nothing which has occurred during that time, has in a single instance or for a single moment interrupted the free and friendly communion which it is our privilege to enjoy within the walls of this Institution, is in itself a most invaluable benefit resulting from its establishment, and affords a gratifying illustration of that ancient sentiment, "The faithful study of the liberal arts softens the manners and banishes barbarism."

May the LEEDS PHILOSOPHICAL and LITERARY SOCIETY continue to flourish with the increasing prosperity of the town, open to all, the Temple of Concord, sacred to the interests of science.

Treasurer's Account.

LEEDS PHILOSOPHICAL AND LITERARY SOCIETY.

ORDINARY ACCOUNT.

DISBURSEMENTS.		RECEIPTS.	
£.	s. d.	£.	s. d.
To Messrs. Kendell & Co., for Cases.....	100 0 0	By Balance in the Hands of Treasurer last year	22 6 10
Mr. Denny	100 0 0	Do. Sub-Curator,.....	2 12 0
Insurance,	11 15 0	Subscriptions of 108 Members,.....	226 16 0
Tradesmen's Bills,	19 12 8	Fines,	3 7 0
Books, Stationery, &c.	31 2 5	Arrears,	9 6 0
Printing and advertising: Report, £5 10s.;		Deposits of Four New Members,	15 15 0
Laws, £5 16s.; Notices, £5 13s.; Adver-	19 2 6	Mr. Atherstone's Lectures.....	11 8 0
tising, £2 3s. 6d.,		Mr. Addams's Lectures.....	15 10 9
Taxes,	8 7 3	Half-year's Rent of Cellars,.....	12 10 0
Coal Gas,	7 9 0	Mr. Tresillian, for Use of Lecture-Room,	12 0 0
Coals and Coke,	10 1 0	Mr. Levison, for Do. Do.	6 0 0
Purchase and Carriage of Specimens,	12 16 9	Sale of an Account of an Egyptian Mummy }	
Sundries—Letters, Door-keeper, &c.	9 11 8	in the Museum of the Society,..... }	0 9 0
Interest to Treasurer,	1 13 0	Sale of duplicate Fossils,	0 13 0
Mr. Atherstone, for Six Lectures,	15 15 0		
Mr. Addams, for Four Lectures,	20 0 0		
	<u>£367 6 3</u>		
Balance in the Hands of the Sub-Curator.....	4 6 4	Balance due to the Treasurer,	32 19 0
	<u>£371 12 7</u>		<u>£371 12 7</u>

DONATIONS AND ADDITIONS

TO

THE SOCIETY'S MUSEUM.

*Those marked thus + are Members of the Society—thus * Honorary Members.*

GEOLOGY AND MINERALOGY.

May, 1832.

- | | | |
|---|---|---------------------------|
| Specimen of Calc Spar, with Copper
Pyrites | } | + Mr. Sparke George. |
| An extensive Collection of Fossil
Shells, from the Paris Basin | } | Purchased by the Society. |

June, 1832.

- | | | |
|--|---|---|
| Several Specimens of Fossil Plants,
from an Excavation near Halifax | } | —— Dawson, Esq., Halifax. |
| A Collection of Fossils, from the
Speeton Clay, including Ammo-
nites communis, Hamites Alter-
natus, Vermicularia Sowerbii var.,
Mya depressa, Specimen of Fossil
Wood, Isocardia Angulata, Ha-
mites — | } | + Robert Hall, Esq. Secretary. |
| Very fine Specimen of Hamites,
——, from Scarborough..... | } | + Thomas Blayds, Esq. |
| Very select Specimen of Arragonite
Plaster Casts of three rare British
Asteriæ, viz. (Asterias Regularis)
(Asterias Lunatus,) (Asterias
Semi-Lunatus) | } | Favil Jas. Copsie, Esq., York.

Mr. S. Woodward, Norwich. |

ZOOLOGY, ENTOMOLOGY, CONCHOLOGY, &c.

June, 1832.

Two Specimens of the Alligator (<i>Lacerta Lucius</i> ,) one measuring 10 feet in length.....	} John Gravely, Esq. Horton.
A living Specimen of the Racoon, (<i>Ursus Lotor</i>)	
Three Snakes from America, called by the Natives, the Moccasin, Thunder, and Water Snakes	
Specimen of the Three-toed Sloth (<i>Bradypus Tridactylus</i>)	} Purchased by the Society.
Loggerhead Turtle (<i>Testudo Caretta</i>)	
Warted Euryale, or Medusa's Head <i>Asterias</i> (<i>Euryale Verrucosum</i>) ..	
Trinidad Goat-sucker (<i>Steatornis</i> <i>Caripennis</i>)	
Great White Heron (<i>Ardea Egretta</i>)	
Roseate Spoonbill (<i>Platalea Ajaja</i>)	
Spur-winged Jacana (<i>Parra Jacana</i>)	
Crested Guan (<i>Penelope Cristata</i>)...	
Cayenne Cuckow (<i>Coccyzus Caya-</i> <i>nus</i>)	
Pair of Yellow Crested Woodpeck- ers (<i>Picus Affinus</i>)	
Golden Winged Woodpeckers (<i>Picus</i> <i>Auratus</i>)	
Sultana Water Hen	
Brazilian Rail	
Rain Bird	
Brazilian Swift	
White collared Swift (<i>Cypselus</i> <i>Collaris</i>)	

August.

White Eyelid Monkey (<i>Simia</i> <i>Ethiops</i>)	} Mr. William Atkinson.
Pair of the Ivory Gull (<i>Larus Ebur-</i> <i>neus</i>)	

Specimen of the Albatros (<i>Diomedea</i> <i>Exulans</i>)	} + Mr. George Morley.
Young Specimen of ditto	
A Pair of the Pintado Petrel (<i>Pro-</i> <i>cellaria Capensis</i>).....	

January, 1833.

Seven Chinese Insects, and	} Josh. Sparshall, Esq. Norwich.
the following British :—	
<i>Panagæus Crux major</i>	
<i>Aphodius depressus</i>	
<i>Edemera acuta</i>	
<i>Heterocerus emarginatus</i>	
<i>Lamia alni</i>	
<i>Necrobia ruficollis</i>	
<i>Anomala Frischii</i>	
<i>Lithosia quadra</i>	
<i>Callimorpha Dominula</i> ...	
<i>Lithosia rubricollis</i> ...	
<i>Ægeria crabroniformis</i>	
<i>Pælobius Herrmanni</i>	
<i>Aphodius depressus</i>	
<i>Naucorus cimicoides</i>	} Rev. James Brown, Norwich.
<i>Crypta bipunctata</i>	
<i>Ranatra linearis</i>	
<i>Thyatira derasa</i>	
<i>Lasiocampa Newstri</i>	
<i>Papilio Machaon</i>	
<i>Doritis Apollo, &c.</i>	

February.

Pair of the Little Auk (<i>Alca alle</i>)	} Mr. Fielding, Leeds.
Skull of the Narwal (<i>Monodon Mo-</i> <i>noceros</i>)	
A Portion of the Greenland Whale	
Water Hen (<i>Fulica Chloropus</i>).....	Mr. William Trant, Dewsbury.

March.

Two very fine Valves of <i>Tridacna</i>	} Mr. George Koster Hirst.
<i>Gigas</i>	

April.

A fine Specimen of the Goat (<i>Capra</i> } Hircus).....	+ Edwin Birchall, Esq. Burley.
Bantam Cock (<i>Gallus domesticus</i> } var.)	+ J. P. Clapham, Esq.
<i>Nerita dilatata</i>	} + Thomas Blayds, Esq.
<i>Neritina canalis</i>	
<i>Neritina latissimus</i>	
<i>Neritina spinosa</i>	
<i>Ricinula clathrata</i>	
<i>Ricinula horrida</i>	
<i>Ricinula arachnoidea</i> ...	
<i>Ricinula morus</i>	
<i>Pectunculus strigilatus</i>	
<i>Partula faba</i>	
<i>Navicella elliptica</i>	} Mr. Thomas Langdon.
<i>Monoceros cingulatum</i>	
<i>Achatina rosea</i>	
<i>Ampullaria</i> , N.S.....	
Skull of the Narwal (<i>Monodon Mo-</i> noceros)	} + Mr. Abraham Clapham.
Jaws and vertebral column of a young shark	
256 Specimens of British & Foreign Insects	+ Mr. Sparke George.
Land Rail (<i>Rallus Crex</i>).....	} + Robt. Hall, Esq. (Secretary)
<i>Cassidaria echinophora</i>	
<i>Natica millepunctata</i>	
<i>Asterias aranciaca</i> , from Sicily	} Mr. H. Denny, Sub-Curator.
Fine group of <i>Anatifera lævis</i>	
<i>Hippopus maculatus</i>	} Purchased by the Society.
<i>Purpura</i> ———	
<i>Murex longispini</i>	
<i>Madrepore fungites</i>	
<i>Cymba melo</i>	

MISCELLANEOUS DONATIONS.

Impressions of several ancient Seals, including the official Seal of the Order of St. Augustine, in Lin- coln; Seal of the Rural Deanery of Hingham, Norfolk; do. of the Rural Deanery of Beccles; Regal Seal of Edward II.; Seal of R. Gardiner, Clerk; do. the Arch- priest of Modena; do. the Guar- dian of the Friars minors of Dun- wich, Suffolk, &c.	} Mr. S. Woodward, Norwich.
Four English Silver Coins, viz. crown and half-crown of Charles II.; shilling of Anne; sixpence of George II.	} Mr. W. F. Stowe,
Two Horse Shoes and Three Musket Balls, found in digging a trench in a field adjoining Marston-Moor, 1832	} Mr. John Baynes, Leeds.

DONATIONS TO THE LIBRARY.

March.

Report of the Yorkshire Philosophi- cal Society for 1831	} Yorkshire Philosophical Society
Arrowsmith's General Atlas, con- taining 53 Maps	} Rev. R. Jacques Atkinson.

July.

The Transactions of the Royal So- ciety of Edinburgh, Vol. XII. p. I. }	Royal Society of Edinburgh.
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Dec. 1832.

Notice sur la Fabrication des Bis- cuits, Animalisés au Moyen, De la Viande de Boucherie, par M. D'Arcet, and three other pam- phlets on the employment of the Gelatine of Bones, by the same Author	} Sir John Byerley, London.
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April, 1833.

- Ridolph's Critical Letters on the
Style of William Etty, Esq. R.A.
&c. by Wm. Carey, H.M.R.I. &c. } Henry Payne, Esq. Leicester.
- The Prose Works of Sir Walter
Scott, Bart. in 52 vols. half-bound } † Dr. Disney Launder Thorp.
- Elements of Chemistry, by M. J. A.
Chaptal, 3 vols. 8vo..... } † Mr. Sparke George.

May, 1833.

- The Climate of London, 2nd edition,
3 vols. 8vo. handsomely bound. } Luke Howard, Esq., F.R.S.,
London: 1833..... } the Author, Ackworth.
- The internal Structure of Fossil
Vegetables, found in the Carbon-
iferous and Oolitic Deposits of
Great Britain. By Henry T. M.
Witham, F.G.S. F.R.S.E. &c. ... } Presented by the Author.
- Histoire des Végétaux Fossiles, ou
Recherches Botaniques et Geolo-
giques sur les Vegetaux renfermés
dans les Diverses Conches du Globe,
par M. Adolphe Brongniart. 4to. } Purchased by the Society.
- Description des Coquilles Fossiles
des Environs de Paris, par G. P.
Deshayes, 4to. } Purchased by the Society.

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FOURTEENTH REPORT

OF THE

COUNCIL

OF THE

Leeds Philosophical and Literary Society,

AT THE

CLOSE OF THE SESSION,

1833-4.



LEEDS:

PRINTED BY R. PERRING, COMMERCIAL-STREET,

1834.

REPORT OF THE COUNCIL.

AT THE

CLOSE OF THE FOURTEENTH SESSION.

THE close of the Fourteenth Session again renders it the duty of the retiring Council to report to the Society at large on the events of the expiring year, and although in that period there have been no occurrences of any very striking character, yet the retrospect presents to view an even tenor of unpretending utility which affords good grounds of congratulation as regards the past, and of hope in respect of the future.

The state of the finances, on reference to the annexed accounts, will indeed again be found to exhibit an apparent excess in the expenditure over the receipts, and an apparently increasing balance due to the Treasurer, but on further examination it will be seen that the old debt on the ordinary account has been entirely paid off, and that in reality the pecuniary concerns of the institution are in a more prosperous

condition than they were at the close of the thirteenth session, on which occasion also the retiring Council reported a progressive improvement. It is also gratifying to state that no fewer than twenty ordinary members have been elected in the course of this session.

The Council have the satisfaction to report that the Museum has still continued to receive important additions, principally donations, a circumstance gratifying, as increasing the amount of our scientific stores, but still more so as a testimony of unabated zeal in the cause of Philosophy and Literature. The following demand the especial acknowledgments of the Society :

Forty British and Foreign Birds, presented by Mr. John Gott.

Twenty-seven North American Birds, by Mr. Samuel Smith.

A valuable Collection of Minerals from Cornwall (seventy specimens)
by Dr. Williamson.

A Bloodhound (*Canis Sanguinarius*) by Mr. Gott.

A Leaf of the Talipot Palm (*Corypha Umbraculifera*) by Mr.
Benjamin Watson.

Human Skulls, and Specimens of Terra Cotta, from Cuzco, the
ancient capital of Peru, by Mr. Hatton Stansfeld.

A small portion of the funds also has been applied to the purchase of specimens, including

An Ostrich, (*Struthio Camelus*.)

King of the Vultures, (*Sarcoramphus Papa*.)

Large Kangaroo, (*Kangurus Labiatus*.)

Pair of the Mandrill or Ribbed Nose Baboon (*Simia Maimon*.)

And a Species of the Civet Cat.

The principal additions to the Library consist of Agassiz' Researches on Fossil Fishes; Raspail's Chemistry; Lindley and Hutton's Fossil Flora; Strata identified by Organised Fossils, by Wm. Smith; Mathematical Tracts on the Theory of the Moon, and on the Perturbations of the Planets, by J. W. Lubbock, Esq. That the leading modern works on many subjects are the productions of a foreign country ought to excite emulation rather than regret in the schools of British science.

The Philosophical and Literary Transactions of the Society during the past year, exhibited in one department, the delivery of Lectures, an unwonted degree of activity: the experience of the preceding Session seemed to justify the Council in adopting a bolder course in this respect than had for some years been deemed compatible with the state of the finances, and the event has fulfilled their expectations. The series was commenced by an esteemed honorary member of the institution, Luke Howard, Esq. of Ackworth, F.R.S. who added to the favours he has previously conferred on the society, by the gratuitous delivery of an interesting course on Meteorology, the science on which the extent and importance of his researches are universally recognised. He was succeeded by Mr. Murray on Combustion, Mr. Addams on Magnetic and Voltaic Electricity, and Dr. Lardner on Modern Discoveries in Astronomy. The series will be concluded by a Course of Lectures on the Elements of Botany, the first of

which will be delivered this evening by Mr. Henry Denny, the Sub-curator. The names that have been just mentioned, render it unnecessary to enlarge on the intrinsic value of the lectures: the attendance has hitherto been gratifying, though varying, as might be expected, according to the nature and novelty of the subject. The Papers read at the ordinary meetings of the society have also contributed materially to the general interest of the Session, which, on the whole, has amply fulfilled the important objects of affording a healthy supply of rational entertainment for those who visit the streams of knowledge with no nobler purpose, and a mass of important information to those who with more manly resolve seek to trace those streams to their pure and ever-springing source.

The Papers read before the Society have been—

1. "On the recent Improvement in Science"—by Dr. Williamson, President—(read October 18th.)
2. "On the Theory of Intellectual Education"—by Mr. Wildsmith—(read November 1st.)
3. "On the Importance of a Knowledge of Natural History in the common affairs of Life"—by Mr. H. Denny—(read Nov. 15th.)
4. "On the Influence which Literature and the state of Society and Manners exercise upon each other"—by Mr. G. Waring—(read December 6th.)
5. "On the objects and advantages of Political Economy, with a sketch of the present state of the Science"—by Mr. J. A. Ikin—(read December 20th.)

6. "On the History of the Art of Music from the earliest periods"—by Mr. Cummins—(read January 3rd.)
7. "On the Music, Painting and Sculpture in Churches"—by the Rev. Thomas Kilby, of Wakefield—(read January 17th.)
8. "On the early History and Ruins of Babylon"—by Mr. W. A. Jackson—(read February 7th.)
9. "On the Philosophy of Amusement, or Importance of a Cultivation of Imagination and Taste, duly proportioned to that of the Understanding and Moral Sense"—by J. G. Marshall, Esq.—(read February 21st.)
10. "On Domestic Architecture from the invasion of Julius Cæsar to the reign of Elizabeth"—by Mr. J. Harper, of York—(read March 7th.)
11. "A consideration of some questions connected with the Natural History of Man"—by Mr. Nunneley—(read March 21st.)
12. "On German Literature"—by Mr. Marcus—(read April 4th.)
13. "On the Literature of the Middle Ages"—communicated by a Member of the Sheffield Philosophical Society—(read April 18th.)

But the distinguishing feature of the Session certainly consists in the occasional introduction of private meetings of members of the Society only, for the reading of short Notices; of these there have been four, at which the following Communications were read, the number of members in attendance in each instance exceeding what had been anticipated.

1st. Private Meeting,

“ On the reciprocal transmission of fluids through membranous tissue”,
by Dr. Williamson.

“ On the presence of Sulphur in certain Metals, and on the impurity
of Hydrogen Gas”—by Mr. West.

2nd. “ The inverted position of objects of vision upon the retina”—by
Mr. Wildsmith.

“ How far are animals capable of resisting the deprivation of air and
food ?”—by Mr. Billam.

3rd. “ On the nature of thermometric indication”—by Mr. J. H.
Whitehead.

4th. “ Hints in support of the materiality of caloric”—by Mr. West.

“ Further observations on the ruins of Babylon”—by Mr. W. A.
Jackson.

The Council have been induced to try this experiment in consequence of certain suggestions contained in a former Report which were favourably received at the last Annual Meeting: the object was to provide some regular channel for the communication of observations which, from the limitation of their extent, the looseness of their construction, the mode of treatment, or the nature of the subject, are not adapted for presentation to a miscellaneous assembly in the long and formal array which the recent usage of the Society has been supposed to demand in the papers delivered at ordinary

meetings. A little consideration will also shew that it is by such means, if at all, that we are to take any part, as a society, in the advancement as well as in the diffusion of knowledge.

The man of science, properly so called, one who devotes the energies of his mind to the investigation of the laws of nature, or makes the application of them in particular departments the business of his life, will exist independently of local associations, will pursue his investigations without their light, will apply his discoveries without their assistance, and is not likely to be indebted to them for many direct advantages beyond the elementary facilities which they may have afforded his youth or his poverty : it is only in national or metropolitan institutions that he can look for much benefit from an intercourse with fellow-labourers in the same field. Indirectly, indeed, he will be benefited by the enlargement of his views on general subjects, but not so as to assist him materially in advancing the limits of his own particular studies : he is only too happy if he meets with a few spirits sufficiently kindred to appreciate his exertions, and if the body with which he is connected be capable both of receiving and transmitting the additions which he makes to the science of the day, it will amply fulfil the most important conditions of its establishment, the general diffusion of the newest information, and will enable the ordinary inquirer, if not to keep pace with his leader, at least never to lose sight of him.

Yet, in a community where thousands of operations are daily performed on scales of every magnitude, if every eye were able to observe and every tongue to report such remarkable phenomena as must from time to time be occurring, over what an extended field of observation would the mind of the philosopher have to expatiate; to what varieties of untried experiment might he be led by some fortunate accident in the most trivial employment; to what new scenes and changes of discovery might he be introduced by a single obscure fact brought before him by an observer of the most limited pretensions! In this manner the humblest member of an institution may become directly instrumental in the positive advancement of science; in many branches, those for instance which rest not so much on experimental induction as on the generalisation of established facts, every well ascertained observation is of the utmost value; indeed, some most important sciences seem as yet only to present a confused mass of such observations, all too imperfect for the master-spirit of the architect to construct a becoming temple with the defective materials.

From the diffusion of science, as distinguished from its advancement, an important advantage results in the security which is obtained that never again will an important discovery be lost to the world, because it is too far in advance before the intellect of the age. That such events have heretofore occurred is matter of history; that they shall never occur again can only be insured by

raising the general level of information to the highest point which circumstances permit. It is therefore no valid objection to the merits of an institution, that it has not yet been the means of introducing some bright peculiar star of science to the world, nor yet recorded many brilliant inventions, to shed a lustre on its annals. It surely were enough, if by a sedulous dissemination of the steady light of knowledge many prejudices are dispelled, and many a mind which might otherwise have slumbered in its ignorance, is awakened to the perception of physical truth ; but in effecting this, an institution effects still more ; it extends the surface and strengthens the foundations on which some future Newton may have to establish his discoveries.

Treasurer's Account.

LEEDS PHILOSOPHICAL AND LITERARY SOCIETY.

Disbursements.		£.	s.	d.
To Balance due to Treasurer		32	19	0
— Messrs. Kendall & Co. for Cases		142	17	6
— Mr. H. Denny.....		100	0	0
— Insurance		11	15	0
— Tradesmen's Bills.....		22	10	11½
— Books, Stationery, &c.....		34	7	0
— Printing and Advertising.....		21	16	4
— Taxes		6	11	5½
— Coal Gas.....		8	10	6
— Coals and Coke		7	19	0
— Purchase and Carriage of Specimens		8	19	7
— Sundry Expenses, Letters, Doorkeeper, &c..		8	4	11
— Mr. Murray for Three Lectures.....		5	5	0
— Mr. Addams for Six Lectures.....		31	10	0
— Dr. Lardner for Six Lectures		42	0	0
— Interest due to Treasurer.		7	0	0
		£492	6	3

Receipts.		£.	s.	d.
By Balance in the Hands of the Sub-Curator.....		4	6	4
— Subscription of 109 Members		228	19	0
— Fines		4	16	0
— Arrears		18	18	0
— Subscriptions and Deposits of 9 New Members..		45	3	0
(One Subscription not paid.)				
— Mr. Howard's Lectures		5	16	0
— Mr. Murray's Lectures		1	13	6
— Mr. Addams' Lectures		8	14	0
— Dr. Lardner's Lectures		24	10	9
— Mechanics' Institute, for use of Lecture Room				
Three Nights		4	11	0
— Sale of Mummy Books		3	8	6
— Mr. Cummins for use of Lecture Room.....		6	0	0
— Rent of Cellars under the Hall		25	0	0
		£381	16	1

Balance in Hand by the Sub-Curator....£5. 1s. 6d.	Balance due to Treasurer....£110. 10s. 2d.
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DONATIONS AND ADDITIONS

TO

THE SOCIETY'S MUSEUM.

*Those marked † are Members of the Society, thus * Honorary Members.*

GEOLOGY AND MINERALOGY.

- | | | |
|--|---|-----------------------------|
| Fine Specimen of Copper Ore with Mundic, from
Cornwall | } | Mr. John Drew. |
| Geological Model of the Neighbourhood of Nettle-
ton, near Caistor, in Lincolnshire..... | } | John Edward Lee, Esq. Hull. |
| Specimen of Iron Pyrites on Sandstone, found in
excavating for the Leeds and Selby Rail-
Road, Whitkirk | } | Mr. Bartlett. |
| Specimens of Iron Pyrites, do., do..... | | Mr. Beckwith. |
| Fluor Spar, Calc Spar and Carbonate of Iron,
from Cumberland..... | } | |
| Chlorite and Massive White Quartz, from
Penryn | } | |
| Two varieties of Calc Spar, Crystals of Quartz,
coloured by Titanite, from the Menai Straits | } | † Mr. Sparke George. |
| Four Fossils from the Mountain Limestone,
Penryn, Black and White Stratified Lime-
stone, from Conway Castle Rock..... | } | |
| Specimen of Caryophyllia..... | | Mr. B. Murphey. |

A valuable Collection of Minerals, principally Cornish,)
consisting of 70 Specimens, comprising the following:—

- No. 1. Native or Malleable Copper (Arboriferous)
2. Native or Malleable Copper crystallized.....
3. Massive Purple Copper (Wheal Tolgus, near Redruth)
4. Crystallized Purple Copper, from Dolcoath, near Camborne
5. Massive Grey Copper
6. Crystallized Grey Copper.....
7. Botryoidal Yellow Copper, or Copper Pyrites..
8. Yellow Copper on Quartz, in Tetrahedral Crystals
9. Yellow Copper, in Six sided Plates with Spathose Iron (Carbonate of Iron), on Quartz, from Wheal Tolgus, near Redruth
- 10 & 11. Two varieties of Tennantite, from the Neighbourhood of Redruth
12. Crystallized Red Oxide of Copper
13. Crysocolla (Botryoidal)
14. Arseniate of Copper in Octohedral Crystals..
15. Arseniate of Copper in Capillary Crystals, upon an earthy matrix, apparently invested with Oxide of Manganese
16. Native Copper and Malachite, in Serpentine, from the Neighbourhood of the Lizard
17. A very rich Stone of Tin (massive Oxide)....
18. Sparable tin, from the Neighbourhood of Helston
19. Oxide of Tin, in Quadrangular Prisms, of which the edges are truncated, with mica in six sided plates, upon a matrix of very hard granite, from St. Michael's Mount
20. Tin in Concretions (Toad's Eye Tin)
21. Wood Tin in Veins; in Feldspar.....
22. Wood Tin in Pebbles—Stream Tin (near Penzance).....
23. Carbonate of Iron in Six sided Plates, with minute Crystals of Phosphate of Lead
24. Carbonate of Iron in acute angle Rhomboids, upon Quartz, from St. Just (Roscagel Mine)..
25. Carbonate of Iron, in Prisms, with Iron Pyrites, upon Stalactitic Quartz, from St. Just.....
26. Hæmatite (Black) Fibrous Black Oxide of Iron, Blistered Iron
27. Black Hæmatite, slightly coated with Chalcodony, with Opal, from St. Just

† Dr. Williamson,
(President.)

28. Hydrous Oxide of Iron, with Brown Haematite,
Wood Iron
29. Earthy Phosphate of Iron, with vitreous
Phosphate running through the Stone, from
Botallack, in St. Just.....
30. Iron Pyrites reticulated—Six sided Plates
31. Iron Pyrites, in minute Octohedrons, upon
Quartz
32. Iron Pyrites, aggregated upon Quartz.....
33. Steel Grain Galena (Sulphuret of Lead).....
34. Specular Galena
35. Oxide of Lead (Pseudo Morphous)
36. Phosphate of Lead in Six sided Prisms, upon
a Brown Iron.....
37. Native capillary Silver, in the lode ; with
Sulphuret of Silver, from Herland, near
Camborne
38. Arsenical Silver, with Sulphuret of Silver....
39. Uran Ochre—Pitch Blende, with Yellow Cop-
per, from the Neighbourhood of St. Ives
40. Uranite—Phosphate of Uranium, in Tabular
Crystals, from the Neighbourhood of Redruth
41. Carbonate of Bismuth, with Native Bismuth—
42. Native Bismuth, with Sulphuret of Bismuth
(St. Just)
43. Sulphuret of Antimony
44. Oxide of Manganese (Leaf Manganese).....
45. Grey Cobalt (Arsenical Cobalt).....
46. Plate of Quartz, with Iron Pyrites.....
47. Quartz, with a coating of Oxide of Iron.....
48. Brown Quartz, coloured by Iron (St. Just)....
49. Ferruginous Quartz ; Iron Flint ; Eisenkiesel,
from St. Just
50. Opal upon Quartz, from St. Just.....
51. Chalcedony (Red) upon Quartz, from the
Neighbourhood of Penryn.....
52. Common Jasper, from St. Just.....
53. Garnets, from St. Just
54. Stilbite (White) with Needle Zeolite, from St.
Just
55. Axinite, from St. Just
56. Hornblende with Apatite, and massive Garnet,
from St. Just
57. Actynolite, from St. Just
58. Asbestos, from the Lizard Point

† Dr. Williamson,
(President.)

- | | |
|---|-------------------------------------|
| 59. Topaz (White), with Mica, upon Granite, from St. Michael's Mount | } + Dr. Williamson,
(President.) |
| 60. Serpentine, from the Lizard | |
| 61. Mica in Six sided Plates, with crystallized Feldspar, and Apatite (Green) from St. Just.. | |
| 62. Mica with Tungstate of Iron (Wolfram), from St. Michael's Mount | |
| 63. Polished Steatite, from the Lizard | |
| 64. Schorl, from under the Logan Rock, in St. Sevan..... | |
| 65. Arragonite (Stalactitic) | |
| 66. Pearl Spar, in acute rhomboids, from the Neighbourhood of Penzance | |
| 67. White Granite, of which the Feldspar is decomposed ; used for the Manufacture of Porcelain, from Breage | |
| 68. Granite, with crystallized Feldspar ; Black Mica and Hornblende, from the Neighbourhood of Penzance | |
| 69. An extremely hard and close-grained Granite, with Schorl, from the Scilly Islands..... | |
| 70. Granite with Hornblende,—a piece of the Land's End. | |

ZOOLOGY.

- | | |
|---|-----------------------|
| Variety of the Common Mole (<i>Talpa Europea</i>) | Mrs. J. Dixon. |
| Immature Specimen of the Cuckoo (<i>Cuculus Canorus</i>).. | *Mr. H. Denny. |
| Specimen of <i>Coristes Cassivelaunus</i> | Mr. Metcalf. |
| <i>Asteria Papposa</i> | Mr. Carlin. |
| Specimen of the Heron (<i>Ardea Cinerea</i>)..... | Mrs. J. Dixon. |
| Skeleton of the Goatsucker (<i>Caprimulgus Europeus</i>) .. | * Mr. Thos. Robinson. |
| Flying Squirrel or Assapan (<i>Pteromys Volucella</i>)..... | † Mr. Samuel Smith. |

27 American Birds including the following :—

Prairie Warbler (<i>Sylvia discolor</i>).....	
Blue Yellow Back Warbler (<i>Sylvia Americana</i>)	
Maryland Yellow Throat (<i>Sylvia Trichas</i>)	
Rathbone's Warbler (<i>Sylvia Rathboni</i>)	
Black and White Creeper (<i>Sylvia Varia</i>)	
Blue Eyed Yellow Warbler (<i>Sylvia Æstiva</i>)	
Black Throated Blue Warbler (<i>Sylvia Canadensis</i>)..	
Black Poll Warbler (<i>Sylvia Striata</i>)	
American Redstart (<i>Muscicapa Ruticilla</i>)	
Yellow Bird or Goldfinch (<i>Carduelis Americana</i>)....	
Orchard Oriole (<i>Icterus Spurius</i>)	
Rice Bunting (<i>Icterus Agripennis</i>)	
Great Carolina Wren (<i>Troglodytes Ludovicianus</i>) ..	
Summer Red Bird (<i>Tanagra Æstiva</i>)	
Fox-coloured Sparrow (<i>Fringilla Iliaca</i>)	
Golden Crowned Thrush (<i>Turdus Aurocapillus</i>)	
Red-breasted Nuthatch (<i>Sitta Canadensis</i>).....	
&c. &c.	

† Mr. Samuel Smith.

King of the Vultures (<i>Sarcoramphus Papa</i>)	
Black Ostrich (<i>Struthio Camelus</i>)	
Pair of the Mandrill or Ribbed Nose Baboon (<i>Simia</i> <i>Maimon</i>)	
Large Kangaroo (<i>Kangurus Labiatus</i>) and a Species of Civet Cat.....	

Purchased by the Society.

A Collection of 40 British and Foreign Birds, including the following :—

Male and Female Smew (<i>Mergus Albellus</i>)	
Woodcock (<i>Scolopax Rusticolor</i>)	
3 Specimens of the Sanderling.....	
Toco Toucan (<i>Rhamphastos Toco</i>)	
Yellow Breasted Toucan (<i>Rhamphastos Tucanus</i>) ..	
Aracari Toucan (<i>Rhamphastos Aracari</i>) Male and Female	
Piperine Toucan (<i>Rhamphastos Piperivorus</i>).....	
Pair of the larger Ani (<i>Crotophaga Major</i>)	
Red Rumped Cassique (<i>Cassicus Hæmorrhous</i>)	
Crested Cassique (<i>Cassicus Cristatus</i>).....	
Black Headed Fruiteater (<i>Procnias Melanocephalus</i>)	
Pair of the Cayenne Psaris (<i>Psaris Cayanus</i>).....	
Pied Shrike (<i>Lanius Doliatius</i>)	
Collared Barbet (<i>Bucco Collaris</i>).....	
Gray Shrike (<i>Tyrannus Griseus</i>).....	

† John Gott, Esq.

Specimen of the Blood Hound (<i>Canis Sanguinarius</i>) ..	+ Benjamin Gott, Esq.
Horns of the Red Deer (<i>Cervus Elephas</i>).....	+ Mr. T. W. George.
Specimen of <i>Lucanus Alces</i>	Mrs. Howarth, Leeds.
Pair of <i>Portunus Puber</i>	} Purchased by the Society.
Two immature Specimens of the Common Gull (<i>Larus Canus</i>)	
Immature Specimen of the Kittiwake Gull (<i>Larus Rissa</i>)	
Immature Specimen of the Burgomaster (<i>Larus Glaucus</i>)	
Eggs of the Stormy Petrel (<i>Procellaria Pelagica</i>).....	
Fine Specimen of the Badger (<i>Meles Taxus</i>)	
Shoveller Duck (<i>Spathulea Clypeata</i>).....	} + Geo. Walker, Esq.
2 Eggs of the Common Heron.....	
Specimen of the Gannet or Solan Goose (<i>Sula Bassanus</i>) shot at Kirkstall	} Mr. Butler, Kirkstall.
Specimen of the Guinea Parrot (<i>Psittacula Pullarius</i>)..	Mrs. Schwanfelder.
A Series of Specimens of <i>Mytilus Polymorphus</i> , from Timber in the Dock Yard, Goole.....	} J. H. Hodson, Esq. Goole.
Specimens of a New Species of <i>Mytilus</i> , from Preston, in Lancashire	} Mr. J. Murray.
<i>Sertularia Falcata</i>	} + Mr. T. P. Teale.
<i>Tubularia Fistulosa</i>	
<i>Antennularia Indivisa</i>	
<i>Flustra Foliacea</i>	
<i>Cellaria</i>	
BOTANY.	
Several Species of Algæ and British Phænogamous Plants	Mr. Carlin, Leeds.
Leaf of the Talipot Palm (<i>Corypha Umbraculifera</i>), from Ceylon	} + Mr. Benj. Watson.
Leaf of the Date Palm (<i>Phoenix Dactylifera</i>)	} * Mr. H. Denny, (<i>Sub Curator.</i>)
Leaf of the Sago Palm (<i>Cycas Revoluta</i>)	

MISCELLANEOUS.

Fan made of the Leaves of the Talipot Palm from Ceylon	+ Mr. Benj. Watson.
Cloak of a New Zealand Chief	Mr. Wm. Nevins.
Two Ironwood Spears from Tahiti	{ • George Bennet, Esq. London.
Human Skulls, and an interesting collection of specimens in Terra Cotta from Cuzco, the ancient capital of Peru	
	} Hatton Stansfeld, Esq.

LIBRARY.

Mathematical Tracts, viz.—	{ T. W. Lubbock, Esq. F.R.S., the Author, London.
On the Theory of the Moon, and on The Perturbations of the Planets, 8vo.	
An Outline of the Geology of Norfolk, with Plates, 8vo., by Samuel Woodward, F.G.S.	{ Purchased by the Society.
Eighth and Ninth Reports of the Bristol Institution Philosophical and Literary Society	
Dr. Riley's Lectures on Erpetology, delivered before the Bristol Institution	{ The Bristol Institution.
Reports of the British Association for the Advance- ment of Science for 1831 and 1832, 8vo.	
Lithographed Signatures of the Members of the British Association who met at Cambridge, June, 1833....	{ + Dr. Disney L. Thorp.
Strata identified by Organized Fossils, Plates, by William Smith, folio	
Report of the Scarborough Philosophical Society.....	{ Scarborough Philosophical Society.
Mohs's Mineralogy, translated from the German by Wm. Haidinger, 3 vols. 8vo.	
First and Second Reports of the Halifax Philosophical Society	{ • Mr. Sparke George. Halifax Philosophical Society.
Recherches sur les Poissons Fossiles par Louis Agassiz, 4to., Neuchatel, 1833.....	
Raspail's Nouveau Systeme de Chimie Organique, 8vo..	{ Purchased by the Society.
The Fossil Flora of Great Britain, or Figures and Descriptions of the Vegetable Remains found in a Fossil State in this Country, by John Lindley, F.R.S., &c., and Wm. Hutton, F.G.S., &c.	
Audubon's Birds of America, vol. 2.....	

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FIFTEENTH REPORT

OF THE

COUNCIL

OF THE

Leeds Philosophical and Literary Society,

AT THE

CLOSE OF THE SESSION,

1834-5.

LEEDS:

PRINTED BY JOHN HEATON, 7, BRIGGATE.

MDCCCXXXV.

REPORT OF THE COUNCIL,

AT THE

CLOSE OF THE FIFTEENTH SESSION.

WITH the Meeting at which the Officers and Council present this Report, the LEEDS PHILOSOPHICAL AND LITERARY SOCIETY closes its Fifteenth Session: a Session by no means unmarked with occurrences of that peaceful interest which characterizes the annals of science; but at the same time presenting certain new and striking peculiarities which demand the most serious consideration of the members of every class, since it cannot be concealed that they materially affect the future prospects of this Institution.

In the first place, the Society will learn with regret, that the progressive improvement in their finances, which of late years has been frequently announced by retiring Councils, has not continued during the present year: on the contrary, whilst the Proprietary debt goes on gradually increasing, as it must still do, unless some extraordinary means be adopted for its liquidation;—the ordinary account also exhibits a balance of £154. 17s. 9½d. due to the Treasurer, being an increase of £44. 7s. 7½d. since May, 1834. A reference to the Treasurer's account will shew that

this is only partially accounted for by certain extraordinary repairs: it is in reality connected with some of the novel circumstances already alluded to, in which the Society is placed.

A partial cause of this deficiency, and a consequence of the same circumstances, is to be found in the almost unprecedented fact, that in the course of the expiring year, not a single new Member has been added to the numbers of the Society. Rule 49, by which a certain class of persons under age are admissible without the usual payment of three guineas, has been acted upon in one instance, and for the first time, though it has now been many years in operation. It has been suggested that the annual subscription required from such parties is fixed at too high a rate.

The Council have to conclude their enumeration of adverse occurrences by lamenting the paucity of Lectures which they have been enabled to supply. Negotiations were opened with various Lecturers of eminence, but were not brought to any satisfactory issue, except in the case of the course on Optics, delivered by MR. ADDAMS. We have, however, the gratification to state, that by means of an arrangement with the gentlemen connected with the LEEDS MEDICAL SCHOOL, this Society will, during the intersessional months, have the honour of being the first to introduce to a Yorkshire audience DR. GRANT, the first British comparative anatomist of the age.

The Papers read at the ordinary meetings of the Society, have certainly not been second in interest or

importance to those of any recent year: the extensive range of investigation which many of them required, and the spirit of inquiry which some of them excited, is clearly shown by the following enumeration of them:—

1. "An Account of the late Scientific Meeting at Edinburgh"—by Mr. West, *Secretary*—(read Oct. 17th, 1834.)
2. "On certain Modern English Poets"—by Mr. Wm. Armitage Jackson—(read Nov. 7th, 1834.)
3. "On the General Improvement and Prosperity of Leeds as affected by the Smoke of the Factories, with some Remarks on the Means of abating the Nuisance"—by Mr. Christopher Kemplay—(read Nov. 21st, 1834.)
4. "On the Natural History of the Genus Actinia" (Sea Anemone)—by Mr. T. P. Teale—(read Dec. 5th, 1834.)
5. "On the Study of Geology"—by Robt. Hall, Esq. Barrister-at-Law, *Secretary*—(read Dec. 19th, 1834.)
6. "On the Origin of the English Language"—by Dr. Wright, President of the Wakefield Philosophical Society—(read January 2nd, 1835.)
7. "On Leeds and its Improvements"—by Adam Hunter, M.D. *Vice-President*—(read January 16th, 1835.)
8. "An Appeal from Musicians to First Principles in behalf of Vocal Music"—by Mr. John Wilkinson, Commercial-Street—(read February 5th, 1835.)
9. "An Appeal," &c.—a continuation of the last Paper—by Mr. John Wilkinson—(read February 20th, 1835.)

10. "On the Imperfection of the Musical Scale," in reply to a Paper lately read before the Society—by Wm. Hey, Esq.—(read March 6th, 1835.)
11. "On the Isiac Mysteries"—by the Rev. R. W. Hamilton—(read March 20th, 1835.)
12. "On the Motions of Bodies generally acted upon by Forces tending to a point,—and particularly with reference to the Solar and Lunar Theories"—by the Rev. Joseph Holmes, A.M.—(read April 3rd, 1835.)
13. "On the Literature of the Middle Ages"—by H. J. Gainsford, Esq. Secretary of the Sheffield Philosophical and Literary Society—(read by Dr. Williamson, April 24th, 1835.)

There have also been five of the Private Meetings established by the Rule adopted at the last Annual Meeting, and the Council were in possession of materials for a sixth. Whether the experiment has or has not succeeded, is a question on which there is a difference of opinion: some pointing to the extremely thin attendance as proof of failure,—others relying on the nature and quality of the Papers produced there as incontrovertible evidence of success. The subjects brought before the Private Meetings have been as follows:—

FIRST PRIVATE MEETING,

- "On the Anatomy of Limaces, (Slugs) with a separation of them into distinct Species, founded on their internal organization"—by Mr. Nunneley—(read Nov. 14th, 1834.)
- 2nd. "On the Temperature of the Tunnel of the Leeds and Selby Railway"—by Mr. West.

"On the Practicability of delineating the Modulations of the Voice in Speech, by a System of Musical Notation"—by Mr. John Wilkinson—(read Dec. 12th, 1834.)

3rd. "On the supposed connexion between Odours and Miasmata"—by Mr. Wildsmith—(read January 9th, 1835.)

4th. Remarks communicated by Charles Waterton, Esq. of Walton-Hall, "On certain Statements relating to the Rattle-Snake," made by Mr. Audubon in Jameson's Edinburgh Philosophical Journal.

"Observations on the relations of certain Vapours with respect to Heat"—by Mr. J. H. Whitehead—(read Feb. 13th, 1835.)

5th. "On the Anatomical Affinities of the Marsupiata"—by Mr. John Hey, *Curator*—(read March 13th, 1835.)

The probability that the due encouragement of purely scientific enquiry would occasionally elicit communications not merely meriting but demanding publication, has induced the Council to submit to the Society a plan for publishing a fasciculus of some of the past transactions of this Institution: they did not, however, feel themselves justified, nor is it probable that their successors will feel themselves justified, in pushing forwards the publication, unless the amount of subscriptions be such as nearly to cover the necessary outlay. Individual members will decide for themselves whether they will encourage that love of honourable fame which stimulates even scientific minds, and promote what ought to be one of the principal characteristics of the Society—the pursuit of strictly scientific investigations.

Towards the commencement of the Session, the Secretaries received a letter from the London Statistical Society, asking an answer to certain queries, and suggesting the propriety of establishing some channel of mutual communication. To the reply of the Council assenting to the general proposition, no answer has yet been received: nevertheless the subject is one of growing intricacy and importance, and if this Society can devise any means by which it can be prosecuted with adequate attention, they will assist materially in accumulating and analysing a mass of information of incalculable practical importance to the community at large.

It has already been stated that the Session was opened with "An Account of the late Scientific Meeting at Edinburgh," by MR. WEST, one of the Secretaries of the Society, and its representative at the Edinburgh Meeting. That assembly drew into the North two distinguished philosophers, strangers in person and in residence, but names familiar as household words to the ears of their fellow-labourers in the fields of science. These gentlemen, DR. BUCKLAND, Professor of Geology at Oxford, and M. AGASSIZ, Professor of Natural History at Neufchatel, attracted by the fame of the specimens of fossil fish from the coal formations of the district, took the opportunity of visiting Leeds for the express purpose of inspecting its Museum. That they were satisfied with the general arrangements, and even acknowledged some instruction in minor details, is certainly not discreditable to

those officers whose particular departments passed under review. The service to science rendered by our Museum in supplying M. AGASSIZ not only with some smaller objects of illustration, but also an important and unique link in his work on fossil ichthyology, can scarcely be sufficiently appreciated in a country where the general tendency of our pursuits and occupations induces us most naturally to measure value merely by the pecuniary scale. As a memorial of the visit, and a tribute of respect to the visitors, this Society has since had the satisfaction of enrolling them among its honorary members.

After what has just been said, it is needless to urge further the importance of so characteristic a branch of this Institution as its Museum: and in this respect the Council have again to acknowledge the continued support of many valued friends. MR. NUNNELEY, in presenting the forty-six preparations illustrative of his Paper on Limaces, read before one of the Private Meetings, has dedicated to public use the fruits of many a toilsome hour, in which patience and perseverance must have been added to ingenuity and dexterity, and has given one more proof of the generous, open spirit of modern science. The collection illustrative of local geology, the cultivation of which was particularly urged by the illustrious visitors already alluded to, have been much enriched by a large and valuable collection of fossil plants from the coal measures, presented by MR. BEDFORD, of Gildersome, through the medium of MR. SPARKE GEORGE, who

has himself also presented many geological specimens. In mineralogy MR. H. STEAD has presented a magnificent specimen of stalactitic carbonate of lime from the quarries at New Laiths: the importance of this class of specimens, as illustrative of certain geological causes, has been recognised by a Sister Institution, in acknowledging a similar addition to its Museum, from the Kingston Cave, near Cahir.

In the antiquarian department, silver coins, found in an old building at Pudsey, have been presented by MR. FARRAR.

In comparative anatomy, the Museum has received an important accession in twenty-one skeletons of birds and fishes, prepared by the skill and industry of MR. HENRY DENNY, the Sub-curator.

Among the additions to the library, we must especially acknowledge the first volume of the nautical and hydraulical experiments of the late COL. BEAUFOY, printed at the cost of his brother HENRY BEAUFOY, Esq. and by him gratuitously distributed to scientific societies and individuals. One of the earliest and most constant friends of the Society, JOHN MARSHALL, Esq. has presented the magnificent work of M. AGASSIZ on Fossil Ichthyology; and DR. HIBBERT his own interesting work on the Freshwater Limestone of Burdiehouse.

As far as regards the ordinary details of the Society, the retiring Council have little to suggest to their successors, beyond calling their attention to the practice which appears to be adopted in some other

scientific bodies, of directing, in some degree, the attention of the Society to those subjects which have been recommended for experiment or inquiry, by the meetings of the British Association.

The point which will demand most serious attention on the part of the Council to be elected this day, is the alteration which has taken place in the prospects of the Society, in consequence of the recent establishment of an Institution in this town, much more popular in its constitution, embracing many of the objects of the older Society, and offering, at a much lower rate, most of the same advantages,—for the liberal access which is afforded to the stores of our Museum, certainly diminishes the pecuniary value of that privilege. It is impossible to view with any other feelings than those of good will, any Institution whose object is to promote the mental cultivation of the community: only there are interests which it is the duty of the Council to protect; and it is not too much to say, that if the resources of the LEEDS PHILOSOPHICAL AND LITERARY SOCIETY were to be diminished, and its operations confined within closer limits, the cause of science would, locally at least, suffer material detriment. The liberality, however, which this Society has ever experienced from its individual members, leaves no room to doubt that they will readily adopt any reasonable means of invigorating its exertions, of extending its utility, and of perpetuating its harmonising influences.

LEEDS PHILOSOPHICAL AND LITERARY SOCIETY.

Proprietary Account.

Balance due to the Treasurer..... £263. 13s. 0d.

Ordinary Account.

Disbursements.		Receipts.	
	£. s. d.		£. s. d.
To Balance due to Treasurer	110 10 3	By Balance in the Hands of the Sub-Curator	5 1 6
H. Denny	100 0 0	Subscription of 112 Members	239 8 0
Insurance	11 15 0	Fines	2 13 0
Tradesmen's Bills	68 1 5½	Arrears	14 18 0
Books and Stationery	50 5 3	One Annual Subscriber	2 2 0
Printing and Advertising	14 8 0	Rent of Cellars under the Hall	25 0 0
Taxes.....	7 8 3	Mr. Addams' Lectures.....	5 16 0
Coal Gas	14 19 3	Mr. Denny's Lectures	8 3 6
Coals and Coke.....	11 3 11		
Purchase and Carriage of Specimens	3 6 5		
Sundry Expenses, Letters, Doorkeeper, &c. ...	18 10 0		
Mr. Addams for Six Lectures on Optics.....	31 10 0		
Mr. Denny for Seven Lectures on Botany.....	10 0 0		
Interest due to Treasurer	6 2 0		
	<hr/> £457 19 9½		<hr/> £303 2 0
Balance in Hand by the Sub-Curator... £0. 4s. 1d.		Balance due to Treasurer	£154. 17s. 9½d.

DONATIONS AND ADDITIONS

TO

THE SOCIETY'S MUSEUM.

*Those marked † are Members of the Society, thus * Honorary Members.*

GEOLOGY AND MINERALOGY.

- | | |
|---|--|
| <p>An extensive and valuable Collection
of Fossil Plants, from a Coal Pit
at Gildersome</p> <p>Large masses of Shale, containing
Unio Subconstrictus and Cyprus
faba, from ditto</p> <p>A series of Specimens illustrating the
superposition of Strata from a
Coal Shaft at ditto</p> | <p style="font-size: 4em; line-height: 1;">}</p> <p>Mr. Bedford, Gildersome,—by
Mr. Sparke George.</p> |
| <p>Very fine Specimen of Lepidoden-
dron, from Bramley Fall.....</p> | <p style="font-size: 4em; line-height: 1;">}</p> <p>† Mr. Sparke George.</p> |
| <p>Specimens of Calamites, from the
Sandstone Grit at Bramley Fall,
and a magnificent Specimen of
Stalagtitic Carbonate of Lime, from
New Laiths, near Leeds</p> | <p style="font-size: 4em; line-height: 1;">}</p> <p>Mr. Henry Stead, Kirkstall,—
by Mr. Sparke George.</p> |
| <p>Several Geological Specimens, from
America</p> | <p style="font-size: 4em; line-height: 1;">}</p> <p>† Mr. J. D. Luccock.</p> |
| <p>Specimen of Strontian, from Studley</p> | <p style="font-size: 4em; line-height: 1;">}</p> <p>† R. C. Battye, Esq.</p> |

- Casts of three rare Fossil Spongiæ,
from the Chalk of Sewerby, near
Bridlington } John Edward Lee, Esq. Hull.
- Mass of Sandstone, containing fine
Specimens of a species of Trigonocaspum, from Dewsbury } Mr. William Trant.
- Mass of Shale with Unio Substrictus } † Mr. Sparke George.
- Specimen of the Burdiehouse Limestone, with small Coprolite } Mr. Alexander Rose, Edinbro'.
- Specimen of Fortification Agate..... } Mr. Downing.
- Specimen of Calcareous Spar, Rose Quartz, and Apatite, from the Mer de Glace } † Dr. Williamson.

ZOOLOGY.

- Skull and Bones of the Ox taken
from a Roman Well at Carvorran,
near Gilsland } † Mr. Perring.
- Specimen of the Tumbler Pigeon ... } Mr. William Trant.
- Specimens of the Chub (*Leuciscus Cephalus*)—Roach (*Leuciscus Rutilus*)—Pike (*Esox Lucius*)—and the Dab (*Pleuronectes Limanda*)... } Purchased by the Society.
- Gold Fish (*Cyprinus Auratus*) } Mr. William Trant.
- Eggs of the following American Birds:
Dusky Duck—Cardinal Grosbeak
—Blue Bird—Song Thrush—Red
Wring Oriole—Marsh Wren—Cat
Bird — Brown Thrush — Purple
Grakle—Lesser Tern..... } † Mr. Abraham Clapham.

- Pea Hen (*Pavo Cristatus*) } † John Goodman, Esq.
- Egg of the Horned Owl (*Strix Otus*) } Mr. Edwin Birchall.
- Specimen of the Barn Owl (*Strix*
 Flammea) } † Mr. Abraham Clapham.
- Specimen of the Jay (*Corvus Glandarius*) and Heron (*Ardea Cinerea*) } † Mr. John Heaton.
- Specimens of the Squirrel (*Sciurus*
 Vulgaris) Thrush (*Turdus Musi-*
 cus) and Blue Titmouse (*Parus*
 Cæruleus) } † Mr. Alfred Birchall.
- Specimen of the Kestrel (*Falco Tinnunculus*) and Turnstone (*Streptopelas interpres*) } † Mr. Edwin Birchall.
- Specimen of the Golden Plover
 (*Charadrius Pluvialis*) } Mr. Martin Cawood.
- Skeletons of the Magpie (*Pica caudata*)—Rook (*Corvus Frugilegus*)
 — Snipe (*Scolopax gallinago*)—
 Water Gallinule (*Gallinula Chloropus*)—Water Rail (*Rallus aquaticus*)—Coot (*Fulica Atrata*)—Sparrow Hawk (*Falco Nisus*) Male and Female—Bullfinch (*Pyrrhula vulgaris*)—Horned Owl (*Strix Otus*)
 — Weasel (*Mustela vulgaris*)—
 Stoat (*Mustela Erminea*)—Bream (*Abramis Brama*)—Dab (*Pleuronectes Limanda*)—Gudgeon (*Gobio Fluviatilis*)—Ruffe (*Cernua Fluviatilis*) } * Mr. H. Denny, *Sub-Curator*.

- Pea Hen (*Pavo Cristatus*)—Pigeon
 —Blue Titmouse (*Parus Cœruleus*)
 —Barn Owl (*Strix Flammea*)—
 Cod (*Morrhua Vulgaris*)—Roach
 (*Leuciscus Rutilus*)—Chub (*Leu-*
ciscus Cephalus) } Prepared from Specimens sent.
- Pair of the Reed Bunting (*Emberiza*
Schœniculus) } † Mr. John Heaton.
- Common Bat (*Vespertilio Murinus*) } Mr. Beckwith.
- Specimen of the Hardhead (*Cottus*
Scorpius) } Mr. Joseph Teale.
- Whimbrel (*Numenius Pheopus*) } Wm. Osburn, Esq.
- Scoter or Black Diver (*Oidemia Ni-*
gra) } † John Edward Brooke, Esq.
- Specimen of the Gar Fish (*Belone*
Vulgaris) from Redcar } Mr. Danby.
- Living Specimens of the following
 Insects:—Pair of *Bombyx Prome-*
thea and *Bombyx Bauhinia*, from
 Pennsylvania } † Mr. Abraham Clapham.
- Pair of *Leptura Carcharias*, and 3
 Specimens of *Bombyx Quercifolia* } Wm. Rudston Read, Esq.
- Specimens of *Geometra Pincaria* and
Lycæna Alsus } Mr. George Reade.
- Forty-six valuable Preparations illus-
 trative of a Paper read before the
 Society, "On Limaces" (Slugs) ex-
 hibiting, in a wet and dry state, the
 Muscular, Alimentary, Circulatory,
 Nervous, and Reproductive Systems } † Mr. Nunneley, Surgeon.

- Prepared Specimens of *Actinia Purpurea* and *Actinia Coriacea*, with the Ovaries } † Mr. T. P. Teale.
- Murex Imperialis*—*Cassis Rufus*—*Cardium Costatum*—*Trochus Niloticus*—*Concholepas Peruvianus*—*Ranella Crumena*—*Achatina Zebra*—*Placuna Placenta*—*Delphinula Laciniata*—*Monodonta* —. *Cardita* } Purchased by the Society.
- Tubipora Musica*—*Caryophyllia Flexuosa*—*Fungia* *Limacina*—*Caryophyllia Fasciculata*—and 2 others } Purchased by the Society.

MISCELLANEOUS.

- Saxon Copper Coins, from Hexham... } Mrs. Thomas Cadman.
- Shoe of a Chinese Woman } † R. C. Battye, Esq.
- Mortar from the Walls of a Roman Edifice, near Gilsland } † Mr. Perring.
- Silver Coins found in an old building at Pudsey:—a Halfcrown, Shilling, and Sixpence of Charles I.;—two Shillings and two Sixpences of Elizabeth;—two Shillings and two Sixpences of James II.;—one Shilling and two Sixpences of James I. } Mr. Farrar, *Grove-House, Pudsey*.
- Antique Brass Dark Lanthorn brought from the Wreck of the Spanish Armada } † R. C. Battye, Esq.
- Specimens of Cloth from California, brought home by Vancouver } * Thomas Meade, Esq. *Chatley*.

LIBRARY.

- Meteorological Observations and Es- } * J. Dalton, D.C.L. F.R.S. &c.
says, 1 vol. 8vo. 1834..... } the Author.
- Eleventh Report of the Bristol Insti- }
tution and Philosophical Society... } Bristol Institution.
- Annual Report of the Yorkshire Phi- }
losophical Society for 1833..... } Yorkshire Philosophical Society.
- Stark's Elements of Natural History, }
2 vols. 8vo. }
Dictionnaire des Termes usités dans }
les Sciences Naturelles, Par. A. J. }
L. Jourdan, 2 vols. 8vo. }
Recherches Anatomiques et Physio- }
logiques sur les Hemipteres, Par. }
M. Leon Dufour, 4to. }
Annales de Chimie, 8vo. }
Phillips's Guide to Geology, 1 vol. } Purchased by the Society.
12mo. }
Recherches sur les Polipes, Par. M. }
Trembley, 4to..... }
Yarrel's British Fishes, 8vo. }
Alderson on the Steam Engine, 1 vol. }
8vo..... }
Audubon's Biography of the Birds of }
America, vol. 2, 8vo. }
- Transactions of the Royal Society of }
Edinburgh, vol. 12, pt. 2. }
Proceedings of the Royal Society of } The Royal Society of Edinbro'.
Edinburgh, Nos. 1, 2, 3..... }
- The Sacred History of the World, }
by Sharon Turner, 1st vol..... } † Wm. Gott, Esq.

- Description of the Tumulus lately
opened at Gristhorpe, near Scarbro',
by William Williamson } † Robert Hall, Esq. *Secretary*.
- Proceedings of the Geological Society
of London, vol. 1. } The Geological Society of
London.
- Nautical and Hydraulic Experiments,
by Col. Mark Beaufoy, F.R.S.
vol. 1, 4to. No. 561..... } Henry Beaufoy, Esq. London.
- Recherches sur les Poissons Fossiles,
Par. Louis Agassiz, from the com-
mencement } † John Marshall, Esq. *Head-
ingley*.
- Description of the Island of For-
mosa, by George Psalmanaazar,
1 vol. 8vo. } Richard Atkinson, Esq. Bar-
rister-at-Law.
- Memoirs of * * * * commonly
known under the Name of George
Psalmanaazar, written by himself,
1 vol. 8vo. }
- On the Freshwater Limestone of
Burdiehouse, by Samuel Hibbert,
M.D. 4to. } Presented by the Author.
- Fifth Report of the Scarbro' Philoso-
phical Society } Scarbro' Philosophical Society.
- Report of the Yorkshire Philosophi-
cal Society for 1834 } Yorkshire Philosophical Society.
- Two printed Letters to Professor
Jameson, by Charles Waterton, Esq. } * Presented by the Author.
- Report of the Manchester Mechanic's
Institute } Manchester Mechanics' Insti-
tution.

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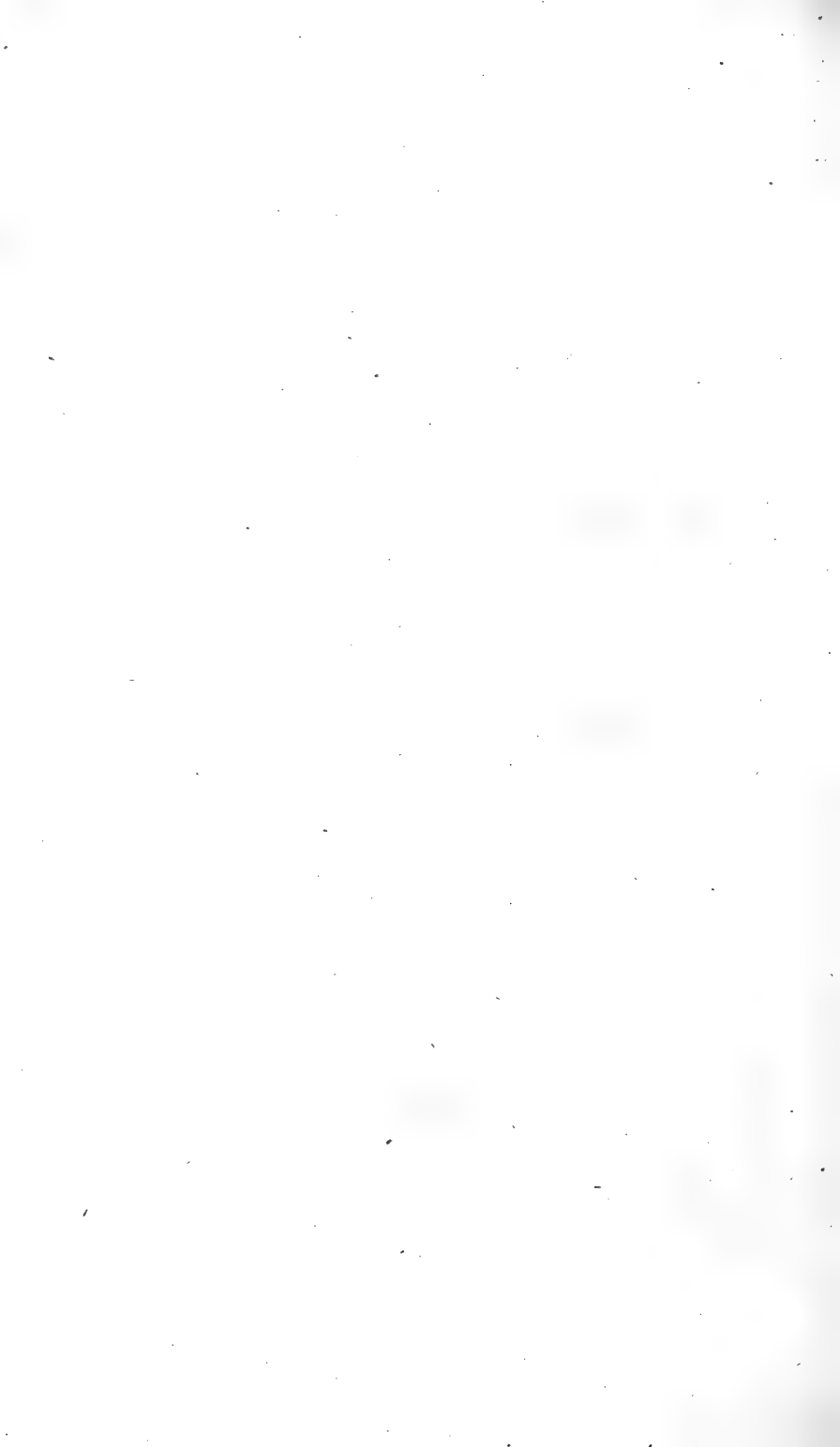
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SIXTEENTH REPORT
OF
THE COUNCIL
OF THE
Leeds Philosophical and Literary Society,
AT THE
CLOSE OF THE SESSION,
1835-6.

LEEDS:

PRINTED BY EDWARD BAINES AND SON, 149, BRIGGATE.

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MDCCCXXXVI.



REPORT OF THE COUNCIL

AT THE CLOSE OF THE

SIXTEENTH SESSION.

In presenting the Annual Report of the Leeds Philosophical and Literary Society, the retiring Council do not feel it necessary to detain the members present at its Sixteenth Annual Meeting, from the consideration of the important questions which await their deliberation, by dwelling at much length on topics not vitally affecting the interests of the Institution.

The Society will learn with regret that a progressive deterioration has taken place in its financial relations: the balance due to the Treasurer on the ordinary account, has been increased from £154 17s. 9½d. to £171 12s. 3½d.: this increase in the deficiency is perhaps partly to be attributed to an inevitable delay in the collection of the subscriptions. The Proprietary debt goes on still increasing with progressive rapidity, and must receive the anxious attention of the newly elected officers of the Society: the amount last year was £263 18s., it is at present £277 5s. With respect to particular items of expenditure, it will be observed that whilst on most heads there has been a considerable reduction, the taxes have advanced from £7 8s. 3d. to

£20 18s. 7½d. This is to be attributed to a change which has taken place in respect of the local assessments, and it is to be feared that in future years this item will receive a still further increase, unless the principle of exempting Public Institutions should again be acted on.

The Council have been disappointed in their supply of Public Lectures ; the two courses which have been delivered before the Society since the last Annual Meeting have, however, been eminently successful. During the intersessional months, Dr. Grant, Professor of Comparative Anatomy in the London University, delivered Ten Lectures of deep interest on the Structure and History of the Invertebrated Classes of Animals ; he has undertaken to proceed with a course on the Vertebrated Classes during the approaching summer : in the course of the Session, Mr. Montgomery, of Sheffield, delivered Six Lectures on the British Poets, which were probably the most attractive that have ever been submitted to this Society. The Society has long had the satisfaction of counting Mr. Montgomery among its Honorary Members ; during the Session it has paid a well-merited tribute of respect to Dr. Grant by adding him to the number.

At the ordinary meetings of the Society, the following Papers have been read during the Session :—

1. " On the Inequalities of the Moon's Orbit occasioned by the disturbing Influence of the Sun"—by the Rev. Joseph Holmes, A.M., the President—(read Oct. 16th, 1835.)
2. The concluding Part of the above Paper—(read Nov. 6th, 1835.)
3. " On the Economy of Nature, as exemplified in the first Principles of the Material World"—by Mr. Wildsmith—(read Nov. 15th, 1835.)

4. "On the Rise and Progress of the Leeds Philosophical and Literary Society"—by Robert Hall, A.M., Barrister-at-Law, Secretary—(read Dec. 4th.)
5. "On the Study of History"—by Professor Smyth, of Cambridge—(read Dec. 18th, 1835.)
6. "On the Philosophy of History"—by Dr. Hunter, V.P.—(read Jan. 1st, 1836.)
7. "On the Classical Period of Greece compared with the Revival of Letters in Modern Europe"—by Mr. H. J. Marcus—(read Jan. 15th, 1836.)
8. "On Botanical Geography"—by Mr. John Hey, Curator—(read Feb. 5th, 1836.)
9. "On Judicial Astrology"—by Mr. William Osburn, Jun. V. P., F.R.S. Lit.—(read Feb. 19th, 1836.)
10. "On the Adaptation of the Atmospheric Constitution to the Physical Condition of Man"—by Mr. Matthew Hall,—(read March 4th, 1836.)
11. "On Geological Climate"—by Mr. John Hey, Curator—(read March 18th, 1836.)
12. "On certain recent Metaphysical Speculations"—by Mr. W. A. Jackson—(read April 1st, 1836.)
13. "On the Scientific Principles of Locomotion by Railways"—by Mr. J. G. Marshall—(read April 15th, 1836.)

It will appear from this enumeration, that the subjects brought before the Society have been interesting, important, and varied: too large a proportion of them have been furnished by Members of the retiring Council for that body to express any opinion on the manner in which those subjects have been treated. They feel impelled, however, by the difficulty which they have experienced in

providing a regular supply of papers, to urge upon the Members at large the absolute necessity of their taking a more active part in the proceedings of the Society. The non-attendance of Members at the private business is at times a source of inconvenience ; and at a crisis when the interests of the Institution require a great application of time and trouble by the Council, they have a right to look for every assistance from the body at large in the provision of papers.

The Papers read at the private meetings have been very few. The Council are willing to attribute the failure on this point in part to the great expenditure of time on elaborate negotiations, which at the early part of the expiring year engrossed the attention of the most active Members of the Society, and partly to a misapprehension of the object of those papers, which were intended to embrace all communications, which from their shortness or other circumstances are not adapted to the more formal exposition which has become usual in the public proceedings of the Society. The following Papers have been read at the Private Meetings :—

PRIVATE MEETINGS.

- 1st. " On *Alcyonella Stagnorum*, a fresh-water Zoophite inhabiting ponds near Leeds"—by Mr. T. P. Teale—(read Nov. 13th, 1835.)
- 2nd. " On the Detection of Arsenic"—by Mr. West, Secretary—(read Dec. 11th, 1835.)
- 3rd. " A Rejoinder to a former Paper on Music"—by Mr. Wilkinson.

If, in looking back at the early reports of the Society, we find that the anticipations of increasing prosperity were then more flattering than have since been realised,

it must not be forgotten that since the commencement of this Institution three others have been established in the town, which severally occupy some part of the same field of labour, and are supported by the exertions of many of the same individuals. It is therefore with much pleasure that the Council announce that the Museum, which is is now perhaps the only peculiar characteristic of the Society, has in the course of the year received more important additions in number and value, both by gift and by purchase, than was the case in the preceding year. The fossils, illustrative of the mountain limestone, have received a well-timed accession, now that the recent publication of one of our Honorary Members on those strata, as exhibited in Yorkshire, is likely to call the attention of students to that part of the Geological Science. The collection of corallines and shells has also received many valuable additions; and particular groups of birds and reptiles have been supplied with illustrations in which they were previously deficient. One gentleman (Mr. Glover,) has availed himself of the opportunities afforded by travel, to bring a collection of insects from the Alps, for the express purpose of being added to the Society's Museum. In a scientific point of view these are important as indicating the *habitat* of particular tribes, many which occur in those regions being identical with the members of our local Entomology: the manner in which the oft-repeated suggestions of successive Councils have in this instance been carried into execution affords an example worthy of imitation. The Council would also acknowledge—

“Several valuable Organic Remains from the Yorkshire Coast”—by
the Rev. Joseph Holmes, (President.)

- “ A Collection of Fossils, from the Magnesian Limestone and the Stonesfield Slate”—by the Rev. William Richardson, of Ferrybridge.
- “ A Collection of 74 Specimens of Zoophytes and Shells, from the Mountain Limestone”—by Mr. Sparke George.
- “ Several recent British Zoophytes”—by Mr. T. P. Teale.
- “ Very fine Pair of the Argus Pheasant”—by A. Melly, Esq., of Liverpool.
- “ Several Fossil Shells from the neighbourhood of Palermo”—by Mr. Robert Hall, (Secretary.)

The Council will not omit this opportunity of observing that the present arrangement of the museum scarcely permits a sufficient exhibition of the less striking but, in the mass, equally important additions to its treasures. The state of the Society's finances has compelled them to pass by an opportunity which will never return, of adding to the buildings of the Institution : it will probably be found, on a careful survey of the space which is at present available, that a rearrangement would afford ample room for the sufficient display of the Collections in every department. No such arrangement can, however, be undertaken, until the Council have a considerable sum available for that purpose : meanwhile, many valuable collections are necessarily hidden, in a manner, which renders them as useless as if they were not in existence, and the contributors to the Museum are left to put the most unfavourable construction on the concealment to which their donations are consigned.

The first Fasciculus of the Society's transactions, which was announced in the last annual report, is now in the printer's hands : it will be illustrated by numerous plates

from the graver of Mr. Henry Denny, the Sub-Curator. The Council anticipate that the publication will be in every way worthy of the Society, and remind the members at large that it depends entirely on themselves to prevent its being a source of pecuniary loss.

At the last Annual Meeting, the Council, at the close of their report, called the attention of the Society to some important alterations which had taken place in their external relations. The retiring Council have devoted much anxious consideration to the subject, and have entered, in conjunction with other parties, into laborious investigations of its bearings : the result of protracted negotiations has not been the formation of any plan which the Council could recommend to the adoption of the Society. They have, therefore, confined themselves to the suggestion of some internal alterations not much interfering with the constitution as at present established, and which present the advantage of being, at least, not absolutely irrevocable, should they be adopted and found not to answer the expectations under which they have been proposed.

Trusting that, whatever may be the immediate result of the deliberations on these important questions, it may be such as will ensure the prosperity, and extend the utility of the Society, the Council now resign the administration of its affairs into the hands of those whom it is the first business of the meeting to appoint as their successors.

LEEDS PHILOSOPHICAL AND LITERARY SOCIETY.

PROPRIETARY ACCOUNT.

Balance due to the Treasurer,£277 5s.

ORDINARY ACCOUNT.

Disbursements.	£ s. d.	Receipts.	£ s. d.
To Balance due to Treasurer.....	154 17 9½	By Balance in the Hands of the Sub-Curator...	0 4 1
Mr. H. Denny.....	100 0 0	Subscription of 102 Members.....	214 4 0
Insurance.....	11 15 0	Subscription or Deposit of 2 New Members	10 10 0
Tradesmen's Bills	37 19 0	Fines	2 16 0
Books and Stationery.....	31 13 10	Arrears	8 6 0
Printing and Advertising	13 2 6	One Annual Subscriber	2 2 0
Taxes	20 18 7½	Rent of Cellars under the Hall.....	25 0 0
Coal Gas	14 16 1	Dr. Grant's Lectures	17 12 0
Coals and Coke	10 5 7½	Mr. Montgomery's Lectures	46 18 0
Purchase and Carriage of Specimens	20 11 0	School of Medicine, being the Balance of their Share towards Dr. Grant's Lectures	17 9 0
Sundry Expenses, Letters, Doorkeeper, &c.	12 0 11	Sale of Mumy Books	0 13 0
Dr. Grant for 10 Lectures.....	52 12 0	Mr. Levison for use of Lecture Room.....	3 3 0
Mr. Montgomery for 6 Lectures	31 10 0		
Interest due to the Treasurer	8 7 0		
	<u>£520 9 4½</u>		<u>£348 17 1</u>
Balance in hand by the Sub-Curator	2 15 3	Balance due to the Treasurer	£171 12 3½

DONATIONS AND ADDITIONS

TO

THE SOCIETY'S MUSEUM.

*Those marked † are Members of this Society, thus * Honorary Members.*

GEOLOGY AND MINERALOGY.

- | | | |
|---|---|--|
| Head of an Ichthyosaurus, from Peak Hill; two portions of Molar Teeth of the Elephant, from Hornsea; portion of a Tusk of the Elephant, from Sandby Mere; 30 Shells, from the Tertiary Deposit at Bridlington Quay; and Specimen of Peco- <i>pteris</i> Whitbyensis | } | † Rev. Joseph Holmes, A.M.,
<i>President.</i> |
| 20 Fossil Shells, in a very high state of preservation, from Palermo—and four ditto from the Quader-sandstein, Schmilka Quarries, on the Saxo-Bohemian Frontier | } | † Robert Hall, Esq., <i>Secretary.</i> |
| Specimens of Mountain Rocks, including Syenite, from Switzerland—Syenitic Granite, from Aberdeen—Grauwacke, with Iron Pyrites, from Hills near Dolgelly, North Wales—Grauwacke Slate, with Shells, from Snowdon, North Wales—Felspar Porphyry, from Hills near Llanwrst, North Wales. | } | † Mr. John Hey, <i>Curator.</i> |

- Specimen of Basalt, from the Dyke
in the Cleveland Hills..... } †Mr. Thomas Nunneley.
- Specimens of *Mytilus Squamosus*,
Axinus Obscurus, *Nucula*, *Tere-*
bratula, *Avicula*, and *Retepora*,
from the Magnesian Limestone—
Shark's Tooth—*Trigonia Angulata*,
Modiola Fimbriata—Teeth of the
Ichthyosaurus, *Melania*—*Natica*
Arguta, and *Thuites Expansum*,
from the Stonesfield Slate—*Ma-*
drepore Catenulata, *Caryophyllia*
—fine mass of the Dudley Lime-
stone—four *Alcyonites*, from the
Chalk—mass of *Barytes*, from
Huddlestone—specimens of *Pec-*
ten, *Clypeus*, &c. from Market
Weigh-ton..... } Rev. Wm. Richardson, Ferry-
bridge.
- Specimen of Chalk from Postwick,
Norfolk, shewing the borings of
an Aquatic Worm ; and several
Shells from the Norwich Crag ... } Mr. Samuel Woodward, F.G.S.
Norwich.
- 74 valuable Zoophytes and Shells,
from the Derbyshire Limestone—
10 specimens of Minerals, from
Derbyshire, including Blende, Ga-
lena, Purple and Brown Flour
Spar and Strontian } †Mr. Sparke George.
- Specimen of Ammonite, in Clay
Ironstone, from the Sand Hills
near Coatham, Yorkshire Coast... } Thomas Jaques, Esq., Leeds.
- Specimen of Mundic, from Cornwall } Mr. Wm. Drew, St. Austel,
Cornwall.
- Fine specimen of Quartz, with Cop-
per Pyrites, from Cornwall..... } Mrs. Hartshorn, Leeds.

ZOOLOGY.

- Madrepora Galaxea—Oculina Virginea—Millepora Alcecornis } Purchased by the Society.
- Specimens of Sertularia Abietina and Sertularia Tamarisca..... } * Mr. H. Denny.
- Specimen of the common Hen assuming the Plumage of the Male. } † Edwin Birchall, Esq.
- Specimen of Malthea Vespertilio, from Rio de Janeiro } J. W. Moore, Esq., *Brazilian Vice-Consul.*
- Specimens of Saxicava Rugosa and Cyclas Rivicola } Rev. Wm. Richardson, Ferry-bridge.
- The Gar Fish (Belone Belone) } Mr. Crossland, Leeds.
- Skeletons of the Guillemot (Uria Troile)—and common Toad (Bufo Vulgaris) } * Mr. H. Denny.
- Fine specimen of Gorgonia Plumosa } Benj. Goodman, Esq., Leeds.
- Fine specimens of Alcyonella Stagnorum } † Mr. George Matthewman.
- Specimen of Testudo Tabulata (Tabular Tortoise)..... } Obadiah Brooke, Esq.
- Actinia* Crassicornis and *Actinia* Dianthus—19 specimens of British Zoophytes, including *Flustra* Foliacea, Pilosa, Truncata, and Membranacea—*Cellaria*, Thuaia, Sali-cornia, Reptans, and Fastigiata—*Sertularia*, Abietina, and Operculata—*Halina*, Oculata, Papillaris, and Panicea—*Plumularia*, Falcata, and Pluma—*Corallina* Squamata, Antennularia Indivisa, *Cellepora* Pumicosa, and *Spongilla* Friabilis. } † Mr. T. P. Teale.

- Echeneis Remora (Sucking Fish)—
 Exocetus Exiliens (Flying Fish)—
 Physalia Pelagica (Portuguese Man
 of War)—Glaucus Atlanticus—
 Scyllæa Pelagica, Pentelasmus
 Lævis and other Marine Animals. } Purchased by the Society.
- Specimen of Rhyzostoma..... } Mrs. J. Gatliff.
- Specimen of Argula Foliacea..... } Mr. T. S. Rusby.
- Specimens of the Nine-banded Arma-
 dillo (Dasypus Novemcinctus)—
 Turbinella Melongena, and Scoly-
 mus—Fasiolaria Trapezium, Voluta
 Scapha, Delphinula Laciniata, Tur-
 bo Chrysostomus, Voluta Diadema
 and Nivosa—Strombus Luhuanus,
 and Auris Dianæ—Cypræa Acha-
 tina, Harpa Nobilis, Trochus Te-
 lescopium, and 20 other Shells not
 before in the Society's collection. } Purchased by the Society.
- A Lion (Felis Leo)—Leopard (Felis
 Leopardus)—Brown Coati (Nasua
 Narica)—Racoon (Procyon Lotor) } Purchased by the Society.
- Specimen of Alcyonella Stagnorum,
 sections of ditto—and Preparations
 of ditto, illustrative of a Paper read
 before the Society } † Mr. T. P. Teale.
- Skins of the India Boa (Python
 Tigris)—and Anaconda (Python
 Scytale)—Eagle Owl (Strix Bubo) } Purchased by the Society.
- 100 Insects, collected on the German
 Alps } Mr. Glover.
- 24 Birds from the neighbourhood of
 the River Gambia, Africa } Purchased by the Society.
- Fine group of Pentelasmus Anatifera } † Mr. Sparke George

Very fine pair of the Argus Pheasant (Phasianus Argus)	} A. Melly, Esq., Liverpool.
Specimen of the Bernacle Goose (Anser Bernicla)	
	} Mr. Henry Hord.

LIBRARY.

Proceedings of the Zoological Society for the Years 1830 to 1835 inclusive	} The Zoological Society of London.
Transactions of the Royal Society of Edinburgh, vol. 13th, part 1	
	} † Royal Society of Edinburgh.
Hedinger's Description of Castleton, in Derbyshire	} † Mr. H. S. Smith.
Proceedings at the Second Anniver- sary Festival of the Worcester- shire Natural History Society, and Annual Report.....	} John Evans, Esq., Secretary of the Worcestershire Natu- ral History Society.
Third Report of the British Associ- ation for the Advancement of Science, held at Cambridge 1833, 1 vol. 8vo.—Fourth Report of the British Association, held at Edin- burgh 1834, 1 vol. 8vo.—Proceed- ings of the Fifth Meeting of the Association, held in Dublin 1835.	} † Dr. Disney L. Thorp.
Thirteenth Report of the Sheffield Literary and Philosophical Society	} The Sheffield Literary and Philosophical Society.
Proceedings of Geological Society of London for the Year 1835	} The Geological Society of London.
Report of the Yorkshire Philosophi- cal Society for 1835.....	} The Yorkshire Philosophical Society.
Illustrations of the Geology of York- shire, part 2, by Professor Phillips, 4to. 1836	} Purchased by the Society.

Critiques on Paintings, by H. P. Parker, 8vo. 1836 } Mr. H. P. Parker, Newcastle.

Audubon's Birds of America, vol. 3 }
 —Audubon's Biography of the } Purchased by the Society.
 Birds of America, vol. 3, 8vo..... }

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SEVENTEENTH REPORT

OF

THE COUNCIL

OF THE

LEEDS

PHILOSOPHICAL AND LITERARY SOCIETY,

AT THE

CLOSE OF THE SESSION,

1836-7.

LEEDS :

PRINTED BY R. PERRING, COMMERCIAL-STREET.

MDCCCXXXVII.

THE UNIVERSITY OF CHICAGO

DEPARTMENT OF THE HISTORY OF ARTS

THE HISTORY OF ARTS

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REPORT OF THE COUNCIL

AT THE CLOSE OF THE

SEVENTEENTH SESSION.

In presenting their Report for the Session of 1836-7, the Council are inclined, in the first place, to state the usual particulars, and afterwards to make such remarks as these may suggest.

The Papers which have been read before the Society are the following:—

GENERAL MEETINGS.

1. "On the Origin of Ancient Greek Tragedy"—by the Rev. Joseph Holmes, A.M., President—(Read Oct. 21, 1836.)
2. "On Education and the Educational Wants of the Town of Leeds"—by Mr. Sulist—(Read Nov. 4th, 1836.)
3. "On the Il Bruto Secondo of Alfieri and the Julius Cæsar of Shakspeare"—by the Rev. C. Wickstead—(Read Nov. 18th, 1836.)
4. "On the Origin of the Ancient Britons"—by Mr. Edwd. Nevins—(Read Dec. 2nd, 1836.)
5. "On the Philosophy of Opinion"—by Mr. Wildsmith—(Read Dec. 16th, 1836.)
6. "On the Messenian Wars"—by Mr. W. A. Jackson—(Read Jan. 6th, 1837.)
7. "Thoughts on Education"—by Mr. John Atkinson—(Read Jan. 20th, 1837.)

8. "On the Influence of Climate and Local Circumstances on the Imagination"—communicated by Mr. Wm. Hey—(Read Feb. 3rd, 1837.)
9. "On Chemical Notation, Isomorphism, and Isomerism"—by Mr. West, Secretary—(Read Feb. 17th, 1837.)
10. "On the Sources and Grounds of History"—by the Rev. R. W. Hamilton—(Read March 3rd, 1837.)
11. "On the Comparative Advantages of a State of Civilization and Literature over a State of Barbarism"—by Mr. Marcus—(Read March 17th, 1837.)
12. "On the Highlands, and the present Condition of the Inhabitants"—by Dr. Hunter—(Read April 21st, 1837.)

It will be observed that, with a single exception, these are all on literary subjects.

PRIVATE MEETINGS.

- "On the Yorkshire Coal Field"—by the late Mr. E. S. George—(Read Nov. 11th, 1836.)
- "On the Management of the Microscope, and the Verification of Microscopic Objects"—by Mr. W. S. Ward—(Read Dec. 9th, 1837.)

It was believed by some that an individual application for a Paper to each Member of the Society would induce many to exert themselves in this way who had not before done so; and thus probably introduce greater variety in the subjects and in the manner of treating them, while the change of authors might have the effect of interesting a larger number in the general prosperity of the Society. Accordingly, a letter from the Secretaries on behalf of the Council was sent previously to the commencement of the Session to each member of the Society. Many of these applications remained unanswered, a few mem-

bers gave some slight expectation of compliance with the wish of the Council, but almost all the replies contained refusals, grounded on distrust of their own abilities, want of leisure, or similar reasons, which most of those who in the present or in former years have been prevailed on by their good will to the Society to overcome them, know to be as fully applicable to themselves as to those who on this occasion have suffered them to prevail.

Accordingly, the list of Papers written by members of the Society presents almost the same names which have appeared, some of them very frequently, in former years.

There are, however, one or two exceptions, and the Council anticipate cordial and effectual assistance from some who have thus, for the first time, entered on the service of the Society.

Whether the attempt to induce more general activity in this respect by individual request for a paper be repeated by their successors or not, the Council would impress upon every member the importance of taking a share in this description of service; not only will those who have in the early stages of the Society's existence been frequent contributors, be removed by death or change of residence, but in a few years advancing age must lessen in some of those who remain, the capability of active exertion on behalf of the Society, though their real interest in its welfare may remain undiminished.

It was feared at one period that the Offices in the Society were too much confined to the same individuals, and an attempt was made to compel a partial

change annually, though on submitting the proposition to the vote at a general meeting it was not passed into a law. The experience of those best versed in the history of the Society shewed them that so far from any wish existing to give a preference to papers written by members of the Council, the real state of things has been exactly the reverse; it is not that Officers and other members of Council write essays because they are such, but those who evince their zeal for the interests of the Society by the production of Papers are generally the persons elected to a share in its management.

The want of similar zeal in a greater number of the members has been the true and the only reason why the offices in the Society have not undergone more frequent change.

Of the loss of active members, by change of residence, the Society has experienced an instance in the removal to London of Robert Hall, Esq., one of its Secretaries; he has been elected an honorary member, and many of the members being desirous further to mark their sense of the value of Mr. Hall's services, it was suggested to invite him to a public dinner on his leaving Leeds. The cordiality with which this suggestion was received and carried into effect, and the character of the attendance on the occasion, fully proved that the advantage of such societies as these, in softening the asperities of party, is no vain boast, or figure of rhetoric, but a really efficient principle.

On the failure of the negotiations (described in a former report,) for effecting a junction between this Society and the Literary Institution, it was concluded

to take measures for rendering the Philosophical and Literary Society more popular in its character, and extending its benefits to a larger number, by the admission of annual subscribers at a low rate, granting at the same time to the ordinary members the privilege of a transferable ticket to the lectures, and to the proprietary members an additional ticket. These alterations in the plan of the Society were adopted at the last Annual General Meeting, and now form part of its rules. They have been so far successful in effecting their intended objects, that 98 annual subscribers have entered, as well as seven ordinary members, which are as many as has been usual of late years.

This large addition to the number entitled to admission to the Meetings of the Society has not, however, produced a corresponding increase in the attendance.

There can be no doubt that the prevalence of sickness during the late winter has been one cause of deficient attendance, and, on more than one occasion, the same circumstance has prevented the performance of promises of intended Papers; so that we have been indebted to others for a substitute, which could not therefore be sufficiently announced in proper time.

The most satisfactory feature in the history of the Society for the past year, is the Museum; the additions by gift have been both numerous and valuable; they are specified at the close of this Report; but we may call particular attention to the splendid Trogon Pavoninus from Guatimala, which is probably the only specimen in a Yorkshire collection,—this was presented, together with two fine specimens of the Flamingo, by

Mr. Thos. Prince; also to the present of 176 splendid insects from Brazil, by Mrs. C. Wellbeloved. 20 Fresh Water Shells from America, and 273 Fossils, by Robt. Hall, Esq. 169 Fossils, by Mr. John Hey, F.L.S. and F.G.S. *Curator*. Very fine mass of Portland Stone, by Mr. J. R. Hubbard. Several Geological Specimens, and a very fine Specimen of *Astræa Rotulosa*, by the Rev. Joseph Holmes.

Nor less gratifying is it that these stores continue to be an object of increasing attraction to our townsmen and to strangers. The number of entries in the Visitors' Book for the past year is 2042, and since most of these are in the form of ——— "and party," the real number of those who have been thus gratified or instructed is much greater, probably two or three times as many. In the years 1832-3 the number of entries was only 1100.

In the exercise of the discretion confided to those Officers of the Society to whose department the Museum more immediately belongs, purchases have been made of some objects of great interest; but remembering that sufficient cannot be taken from the ordinary income to effect much in this way, without seriously trenching on the fund requisite for unavoidable expenses; remembering also that many objects which we now possess, highly useful for study, though less showy in appearance, are, for the present, lost to the scientific inquirer for want of cases; and, above all, bearing in mind the ruinous effect on societies, as on individuals, of a load of debt, the Council would strongly recommend very great vigilance and self-denial in this branch of expense.

The Lectures, which have been provided during the past session, have been unusually numerous and attractive; and had the Society offered no other advantages to its members and subscribers, and estimating them by the ordinary standard of value of public lectures, they must be deemed more than equal to the annual subscription. They consisted of—

1. Ten Lectures "On the Structure and History of Fishes, Amphibia, and Reptiles"—by Professor Grant, of the London University, forming a continuation of Dr. Grant's Series on Zoology.
2. Four Lectures "On English Vocal Harmony"—by Mr. Edward Taylor, of London.
3. Six Lectures "On the External Organs of Sensation in Man and Animals"—by our Secretary—Mr. Nunneley.

The subscriptions are not yet wholly received, nor the bills paid, so that an exact financial statement could not be prepared, but the state of the accounts appears more favourable, from the addition to the receipts, arising from the new class of annual subscribers; the alteration by which these are admitted is, however, too recent to judge how far this can be depended on in future years.

The total receipts of the session 1835 were £348. 7s. 1d., while for the session just ended they already amount to £441. 13s. 7d.

To conclude, the Council would gladly hope that the summer recess will be employed by the members of this Society generally in the accumulation of scientific facts, and the pursuit of literary inquiries, and that the results may furnish an abundant store of interesting papers for the ensuing session.

The establishment of the British Association for the Advancement of Science was an event which the scientific annals of this country will hand down with pride and pleasure. Many of its features are peculiar, yet their success has been fully commensurate with their novelty. Of these not the least remarkable or the least beneficial is its migratory character. In every place where its meetings have been held, it has not merely imparted a temporary stimulus to scientific zeal, but has conferred valuable benefits. When the ensuing meeting shall have taken place, it will have visited in its course the ancient city of York, the two English Universities, the provincial Capitals, Edinburgh and Dublin, the great marts of commerce, Bristol and Liverpool.

Considering the intimate connection of numerous branches of science with the staple manufactures of Britain, it is clear that some manufacturing town must soon be chosen for the place of meeting. Numerous applications to this effect have been presented in former years to the General Committee of the Association from public bodies in Birmingham and Manchester, and your Council, mindful of the benefits which would be derived to the town of Leeds from the meeting taking place here, and of the claim which the great centre of the woollen manufacture, the oldest, and for centuries, the most important in the country, has on the Association, gave instructions to their delegate to the meeting at Bristol, to prefer, on its behalf, a request that the next or an early meeting should be held in Leeds. This application was duly recorded, but to

obtain for it much attention, it must be supported, when again brought forward, by similar requests from other public bodies in the town, and by reasonable expectation of cordial assistance from the inhabitants at large. This support and assistance, the Council cannot permit themselves to doubt, will be freely and abundantly offered when their necessity is made known, and it is the evident duty of the members of this Society to awaken an interest on the subject amongst their fellow townsmen.

LEEDS PHILOSOPHICAL AND LITERARY SOCIETY.

PROPRIETARY ACCOUNT.

Balance due to the Treasurer.....£291. 5s.

ORDINARY ACCOUNT.

Disbursements.		£.	s.	d.	Receipts.		£.	s.	d.
To Balance due to Treasurer		171	12	3½	By Balance in the hands of the Sub-Curator....		2	15	3
Mr. H. Denny		100	0	0	Subscriptions of 96 Annual Subscribers....		100	16	0
Insurance.....		8	12	6	Subscriptions of 104 Members		218	8	0
Tradesmen's Bills		37	7	0½	Deposits & Subscriptions of 8 new Members		40	19	0
Books and Stationery		45	14	7	Fines		2	14	0
Printing and Advertising.....		26	11	6	Arrears		23	6	0
Taxes		21	3	3	Rent of Cellars under the Hall		25	0	0
Coal Gas		16	8	10	Use of Lecture Room		4	0	0
Coals and Coke		17	9	11	Dividend of Leeds and Yorkshire Insurance		6	18	4
Purchase and Carriage of Specimens		10	1	8	Mr. Taylor's Lectures		16	17	0
Sundry Expenses, Letters, Doorkeeper, &c.		11	6	2					
Dr. Grant, for Ten Lectures		52	12	0					
Mr. Taylor, for Four Lectures		42	0	0					
Vocal and Instrumental Accompaniments									
to ditto		12	12	1					
Expenses of Mr. Nunneley's Lectures		12	12	6					
Banker's Interest		9	2	0					
		£595	6	4					
Balance in hand by the Sub-Curator..		3	18	10	Balance due to Treasurer		£441	13	7
							£153	12	9

DONATIONS AND ADDITIONS

TO

THE SOCIETY'S MUSEUM.

*Those marked † are Members of this Society, thus * Honorary Members.*

GEOLOGY AND MINERALOGY.

- 2 very fine Fossils from Palermo;
 38 Fossils from the Oxford Clay; 233 Fossils from the Speeton Clay } * Robt. Hall, Esq., London.
- Granular Bitumen from Germany } * Mr. H. Denny.
- Specimen of Lead Ore from the Laxey Mine, Isle of Man. } † Mr. Wm. Smith Dickinson.
- 32 Fossils from Leckharnton Hill, near Cheltenham; 2 Terebratula, from the Chalk, South Devonshire; an Ammonite, from Lyme Regis; Silver and Lead Ore, from South Devonshire; Copper Ore and Iron Pyrites, from South Devonshire; Syenite, from the Malvern Hills } † Mr. Sparke George.
- 4 Coprolites and 2 Fossil Fish } Wm. Hutton, Esq. F.G.S. &c.
- Very fine Mass of Marlstone, containing Specimens of Ophiuroida Milleri, from Scarborough } Purchased by the Society.

- 20 Fossils from the Mountain Limestone; 8 Fossil Plants, from Gristhorp Bay; Humerus of the Ichthyosaurus, from Peak Hill; 61 Fossils from the Lias, Kelloway's Rock, Chalk, and Tertiary Deposit, near Scarborough..... } † Mr. John Hey, Curator.
- Very fine Mass of 'Portland Stone, with numerous Casts of Cerithrium } † Mr. J. R. Hubbard.
- Specimens of the Lower Tertiary Formation, from Alum Bay, Isle of Wight; 2 Specimens of Fossil Wood, from Sandby Mere, Bedfordshire... } Rev. Joseph Holmes, A.M.
- Piece of Iron, encrusted with Sand, Pebbles, and Shells, from the Beach at Redcar, (Vide Phil. Mag., Jan. 1837) } † Wm. Gott, Esq.
- 14 Zoophytes, from the Dudley Limestone } Mr. Wilson, Wakefield.
- A Collection of Minerals, from Sweden } * W. M. Maude, Esq.

ZOOLOGY.

- Snout of the Saw Fish (*Squalis Pristis*) } Purchased by the Society.
- Specimen of the Crested Plantain-Eater (*Chizærhis variegata*), and a species of *Phænicophaus* } —
- 176 Brazilian Insects, the greater part new to the Society's Collection } Mrs. Wellbeloved, Leeds.
- 20 Bivalve Shells, from the Ohio } * Robert Hall, Esq. London.

- Head of the Chamois (Antelope }
Rupicapra) } † Mr. Thomas Pease, Jun.
- 68 Eggs of British Birds, and a }
Specimen of the Turnstone } Mr. Crosier, Newcastle.
(Streptilas Collaris) }
- 112 German Insects, added to }
the Society's Collection by } Edward Armitage, Esq.
exchange of duplicates with .. }
- Lamia Nubila, Cicindela Ger- }
manica, Cicindela Sylvatica, } Purchased by the Society.
Acheta Campestris, Pontia }
Sinapis, Apatura Iris... .. }
- Several British Insects } Mr. Grantham, Scawby,
Lincolnshire.
- Specimen of Rhyzostoma Cyanea } Mr. Danby
- Pair of Hipparchia Blandina, }
captured in Craven } † Mr. Abraham Clapham.
- Pair of the Red-collared Bengaly }
(Amadina fasciata) } Mr. Wm. Trant.
- Pair of the Stormy Petrel (Pro- }
cellaria Pelagica) } † Mr. J. H. Ridsdale.
- Very fine specimen of Astræa }
rotulosa } Rev. Joseph Holmes, A.M.
- Specimen of Ostrea crista-galli .. } Mr. Wade, London.
- Fine Pair of the Flamingo }
(Phœnicopteris Ruber); spe- }
cimen of the Splendid or }
Pavonian Trogon (Trogon }
Pavoninus); Brazilian Mot- } † Thomas Prince, Esq.
mot (Prionites Brasiliensis); }
Baltimore Oriole (Icterus }
Baltimorus) }
- Quills of the Porcupine } Benjamin Goodman, Esq.
- Tail of the Dolphin, and three }
Fish taken from the stomach } Mr. Wm. Nichols.
of ditto }

2 Specimens of a rare Pteropod ;
 Cymbulia Peronii ; Pollicipes
 Cornucopia ; & Obicula Nor-
 wegia.. } Purchased by the Society.

Several North American Insects { Mr. Townsend Glover, New
 York.

55 Shells, including—*Cymbula*
 Neptuni, Olla & Porcina ;
Voluta hebræa, & guineaica ;
Cypræa Testudinaria, Argus,
 & Tigrina 3 varieties ; *Pyrula*
 Perversa and Reticulala ;
Cerithium Lineolatum, Clava
 and Muricatum ; *Conus*
 Marmoreus, Obesus, hebræus,
 Tessellatus, Spectrum, Maldi-
 vus, Nicobaricus, Eburneus,
 Lineatus, Betulinus, Amadis,
 Lividus, & Prefectus ; *Pleu-*
rotoma Babylonica ; *Terebra*
 crenulata ; *Fusus* longissi-
 mus ; *Achatina* Purpurea ;
Triton succinctum ; *Purpura*
 patula ; *Strombus* vittatus &
 tricornis ; *Fasciolaria* Fila-
 mentum & tulipa ; *Malleus*
 albus ; *Cassis* zebra ; *Haliotus*
 splendidus, corrugata & san-
 guinolenta ; *Dolium*, Perdix
 & Galea ; *Trigonia* Pectinata ;
Eburna glabrata, Zeylanica &
 Areolata. 7 fine specimens
 of Zoophytes, including
Caryophyllia fastigiata, &
 Areolata, Explanaria Ampli-
 cata, Porites clavaria, Madre-
 pora muricata } Purchased by the Society.

Fine specimen of the Atlas
 Moth (*Bombyx* Atlas) }

MISCELLANEOUS.

- Indian Bow and Arrows } † Mr. R. Hick.
- Chinese Compass } Joseph Bowling, Esq.
- Impressions of the Great Seal of }
Elizabeth & Charles I. ... } Mr. J. B. Nevins.
- An Ancient Sword, supposed to }
belong to the Spanish Armada } B. Beverley, Esq.
- Matting from Tahiti } Miss L. Armitage.
- 3 Silver Coins of Edward III. }
found at Harewood } Purchased by the Society.
- An Antique set of Dental In- }
struments } Mr. Wm. Allen.
- Curious Carved Pipe, from Char- }
ter Island, in the Pacific } Joseph Bowling, Esq.
Ocean }
- Pair of Shoes from India..... } † Mr. Wade, London.

LIBRARY.

- Professor Grant's Lectures on }
Comparative Anatomy, 1 vol. } The Author
8vo. }
- Coleridge's Biographia Borealis, }
8vo. } † Mr. John Cross.
- A Letter from Wm. Travis, }
M.D. to Sir J. V. B. John- }
ston, Bart. on the Recent } William Travis, Esq. M.D.
opening of a British Tumulus } Scarborough.
at Scarborough..... }
- Aves Britannicæ, a list of British }
Birds in the Museum of the } The Natural History Society
Natural History Society of } of Manchester.
Manchester }

- Chemical Tables, exhibiting the
present State of our Know-
ledge in regard to the Chemi-
cal and Physical Properties of
Simple and Compound Bodies;
by J. F. W. Johnston, A. M.
Reader in Chemistry and
Mineralogy in the University
of Durham }
- Transactions of the Royal So-
ciety of Edinburgh, vol. xiii.
part ii. ... }
- The Report of the Birmingham } The Birmingham Philosophical
Philosophical Society for 1836 } Society.
- Report of the Yorkshire Philo- } The Yorkshire Philosophical
sophical Society for 1836 ... } Society.
- A printed Letter from Charles
Waterton, Esq. to William
Swainson, Esq. F.L.S. &c. ... }
- Report of the Whitby Philo- } The Whitby Philosophical and
sophical Society } Literary Society.



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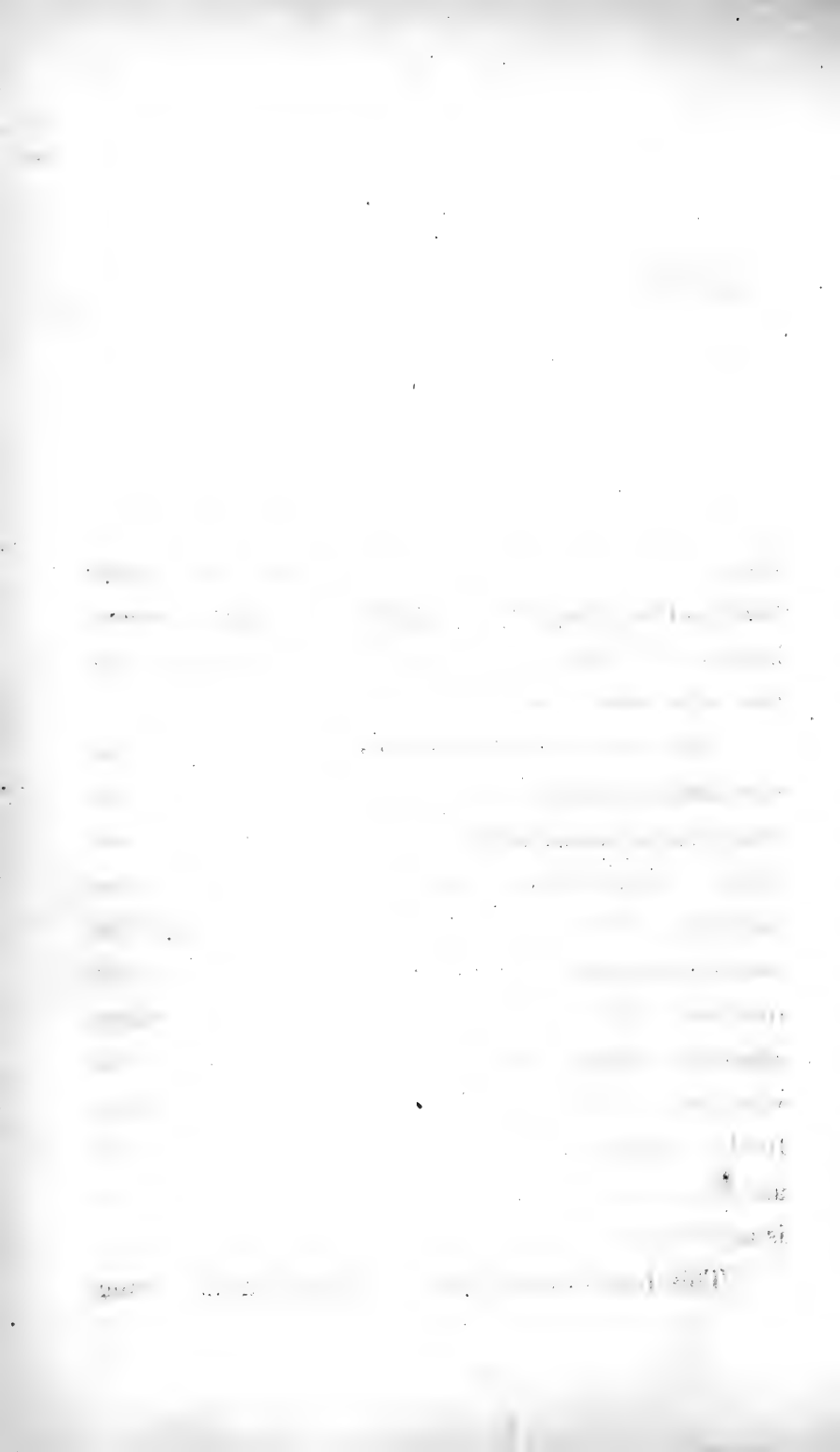
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 John Spear, *London*.
 Thomas Stewart Trail, M.D. F.R.S. Professor of Medical Jurisprudence in the University of Edinburgh.
 Rev. W. V. Vernon Harcourt, F.R.S. and G.S., Vice-President of the Yorkshire Philosophical Society, *Wheldrake*.
 Charles Waterton, Hon. Member of the Yorkshire Philosophical Society, and Bristol Institution, *Walton Hall*.
 John K. Walker, M.D. *Huddersfield*.
 The Ven. Francis Wrangham, M.A. F.R.S. Archdeacon of Cleveland, Prebendary of York and Chester, F.C.P.S. Honorary Member of the Yorkshire and Hull Philosophical Societies, *Hunmanby*.
 Rev. G. Young, A.M. M.W.S. Hon. Member of the Newcastle, Yorkshire, and Hull Philosophical Societies, *Whitby*.

EIGHTEENTH REPORT
OF
THE COUNCIL
OF
THE LEEDS
PHILOSOPHICAL AND LITERARY
SOCIETY,
AT THE CLOSE OF THE SESSION,
1837-8.



LEEDS:
PRINTED BY JOHN HEATON, 7, BRIGGATE.



REPORT OF THE COUNCIL,

AT THE

CLOSE OF THE EIGHTEENTH SESSION.

The circumstances requiring notice in the present Report of the Council, are both numerous and important; since many of them, however, have become known to the Members as they occurred, a brief mention only seems now to be called for.

The finances of the Society present this year no new feature; when strict economy is observed in every branch of expense, and especially when all purchases for the Museum are steadily declined, the annual expenditure of the Society agrees very nearly with its average income; when greater liberality than usual is practised in the engaging of Lecturers, or when those specially interested in the Museum give way to the wish, so natural, to increase its stores from the ordinary funds, a deficiency arises, and the debt of the Society, already a source of uneasiness to some of its friends, is augmented.

This has been the case, in some degree, during

the past year; at its commencement, the debt on the Proprietary Account was £65. 10s. 2d.; this has been increased by the interest to £306.

The balance due to the Treasurer on the Ordinary Account was £153. 12s. 9d.; it is now £224. 14s. 5½d.; showing an increase of £71. 1s. 8½d.

It was observed in a former Report, that the current expenses of this Society had been increased by the imposition of additional local assessments; attempts are now making, by a confederation of Provincial Philosophical Societies, under the auspices of the British Association for the Advancement of Science, to lighten, or remove, the burthen of such assessments, whether national or local. A bill has been prepared, to be brought before Parliament, for this object; and it is stated that the Chancellor of the Exchequer has expressed himself favourable to the relief of Philosophical Societies, bona fide such, if they can be clearly separated from speculations for private advantage. Much difficulty attends this separation, and the result is therefore still very doubtful. The details of labour attendant on this attempt, have been almost entirely undertaken by the Secretaries and other Officers and Council of the Birmingham Philosophical Society. Your Council have thought it right, however, to contribute towards the needful expenses, the object being of

common interest to all similar associations; and they recommend to their successors a continuance of attention to the subject.

In connection with the accounts of the Society, is the security of its property, by the completion of the Deed of Trust under which this is held. The Council have great pleasure in informing the Members, that the legal difficulties which have so long delayed this very desirable object, difficulties renewed and augmented by the changes among Proprietary Members, which time has introduced, are now entirely surmounted, and nothing remains but to obtain the signatures of the present holders of Proprietary Shares. The settling of this Deed has been a subject of labour and anxiety, to some of the most active and zealous among our former Officers; for its final accomplishment, the Society is indebted to the able, zealous, and disinterested services of JOHN HOPE SHAW, Esq. as well as to T. W. TOTTIE, Esq. the agent for the vendors of the land on which the Hall is built. It would be a narrow and incorrect view of this event, to imagine it interesting to the Proprietary Members alone: not only do the shares of the Ordinary Members derive security from the same Deed, but so long as its preparation was delayed, the stability of the whole Society was incomplete.

The Museum is a subject not only of continued, but of increasing attraction to our townsmen and to strangers; the visitors have been more numerous than in any former year; on Monday and Tuesday in Easter week, upwards of six hundred and fifty persons were admitted. That many of these were of the working classes, so far from lessening the advantage conferred on the town by this branch of the Society's operations, is a strong proof of its real usefulness; it shows that a taste for amusement of an intellectual character exists to a great extent among a class to whom this Society affords means for its indulgence, which would not otherwise be within their reach.

It is due to the visitors to the Museum to state, that their conduct is generally marked by order and propriety, and that the specimens have not received material damage from so free an admission. It is believed by some, that the disposition to wanton mischief, with which our countrymen have so often been reproached, would be lessened, if public buildings and the curiosities which they contain, were rendered more easy of access; the experience of this Society is certainly favourable to liberal arrangements in this respect.

The feelings of the Society on occasion of the death of their late valued Curator, JOHN HEY, Esq.

have already been made public and are on record; and the Society owes to his memory a large debt of gratitude.

Three times in eighteen years has the Society been called upon to pay a similar mournful tribute, and the suspension of the arrangement of the Museum attendant on the illness of a single Curator, with the disadvantage of abrupt change of system under a successor, were reasons, among others, which induced a great majority of the Society to pass an alteration of the Laws relating to that office, under which the care of that department is now vested in three Curators jointly. While the Council believe that seldom has it been the lot of any Society to replace a valuable and efficient officer in succession, so completely as we have done, they anticipate, from the conjoint exertions of the three Curators now appointed, accessions to the Museum which no individual could singly obtain, and trust that the classification of specimens will not only proceed with rapidity, but will acquire greater continuity and ability than when liable to entire reversal by the change of the Curator.

The donations to the Museum, during the past year, have not been quite so numerous as on former occasions, but nevertheless highly valuable; the parti-

culars are recorded in the Society's books, and a copy will be attached to this Report.

Three Courses of Lectures have been delivered during the past year: one of ten lectures, in the summer,—

“On the Structure and History of Birds and Quadrupeds”—by Professor Grant, being the conclusion of his series.

A course of eight Lectures—by Professor Johnston, “On Geology.”

A course of six Lectures—by B. R. Haydon, Esq. “On Painting.”

The attendance on all these lectures has been good, on the two latter courses especially; during some of the lectures on Painting the Hall literally overflowed.

The Volume of Transactions of the Society has been now sometime published; its contents have met the approval of men of science in various parts of the nation, whose attainments best qualify them to judge; and its publication places this Society in a highly creditable position, which it had not before occupied. The Records of abstract science are not calculated to attract general readers, but this volume will take its place among permanent books of scientific reference, and it should therefore be found in the libraries of all those persons whose residence in, or connection with, the town, renders them sharers in its reputation.

There remains to enumerate the Papers read before the Society, which are the following :—

GENERAL MEETINGS.

1. "On the Tragic Genius of Shakspeare"—by the Rev. R. W. Hamilton, *President*—(Read Oct. 20th, 1837.)
2. "On the Study of the Natural Sciences"—by Mr. H. Denny, *Sub-curator*—(Read Nov. 3rd, 1837.)
3. "Art in its Usefulness, or Art as the means of affording Employment to an increased Population"—by Robt. T. Stothard, Esq. of London—(Read Nov. 17th, 1837.)
4. "On the Flight of the King of France and the Royal Family, to Varennes in 1791, with Remarks"—communicated by Professor Smyth, of Cambridge—(Read Dec. 1st, 1837.)
5. "On the Composition of Hatchetine, with general Remarks on the Compounds of Carbon and Hydrogen"—by Professor Johnston, of Durham—(Read Dec. 15th, 1837.)
6. "An Account of the Scientific Proceedings of the Meeting of the British Association for the Advancement of Science, held at Liverpool"—by Mr. West, *Secretary*—(Read Jan. 5th, 1838.)
7. "On the Metaphysical Identity of the leading Theories, as those of Clarke, Wollaston, Bentham, and others, on the Grounds of Moral Distinctions"—by the Rev. Charles Wicksteed, B.A.—(Read Jan. 19th, 1838.)
8. "On the Passions of the Human Mind"—by the Rev. R. W. Hamilton, *President*—(Read Feb. 2nd, 1838.)
9. "On the Nature of Statistic Enquiries, and their Relations to other Branches of Science, and to the Purposes of Social Improvement"—by J. G. Marshall, Esq. F.G.S. *Vice-President*—(Read Feb. 16th, 1838.)
10. "An Historical Parallel between Queen Esther and Anne Boleyn"—by Mr. H. J. Marcus—(Read March 2nd, 1838.)

11. "On the Imperfections of Historical Records"—communicated by James Montgomery, Esq., Sheffield—(Read March 16th, 1838.)
12. "On the Hutchinsonian Theory of the Universe"—by the Rev. John Ely—(Read April 6th, 1838.)
13. "What is War"—by Mr. J. P. Sanderson—(Read April 27th, 1838.)

PRIVATE MEETING.

"On the Desirableness of the Formation of Sections for the Collection of Information in particular Branches of Science, more especially in Statistics and Geology"—by J. G. Marshall, Esq. F.G.S. *Vice-President*—(Read Dec. 8th, 1837.)

The Private Meetings may now be considered as having merged into the Sectional Meetings. Two Sections have been established during the session; one for obtaining information on statistical subjects,—the other for perfecting the geological knowledge of this district. In connection with this latter section, during the stay of PROFESSOR JOHNSTON, (who has since been enrolled among our Honorary Members,) two excursions of great interest took place: one upon the line of the Leeds and Selby Rail-Road,—the other to Middleton coal pits; in these strata organic remains, not previously known to exist in this locality, were detected; which render it highly probable that similar excursions to other coal pits in this neighbourhood, might materially enrich our Museum, as well as add to geological data.

The Council notice with great regret, two circum-

stances closely connected with each other, which have prevailed, with occasional exceptions, during the past session. These are, a scanty and irregular supply of Papers, and a thin attendance at the Ordinary Meetings. These evils, which if they continue, would portend most unfavourably to the very existence of the Society, mutually aggravate each other. The Rules of the Society direct, that the Council should decide on the fitness of all subjects intended to be discussed at these meetings; this requires their being furnished beforehand with the title of each Paper, and when so furnished they are enabled, by public notices, to make known to those most interested, the particular subject to be treated of. When this is omitted, the company is of course smaller, few comparatively choosing to attend in uncertainty. But if the want of specific notice lessen the attendance, much more does the frequent recurrence of a small audience check the production of Papers; none will read to empty benches, unless when the essay has served, or is intended to serve, some other purpose. This state of things may well alarm the best friends of the Society; it is induced, in great part, by the bad habit of looking to the Council for the supply of Papers, or to foreign aid; the remedies are beyond the power of any officers; they rest with the Society at large; if the next Council are fur-

nished, during the recess, with the titles of promised Papers, they can give early and full notice of the subjects; if the attendance on the reading of Papers, should in the next session be good, the most acceptable encouragement will be given to the writers.

LEEDS PHILOSOPHICAL AND LITERARY SOCIETY.

PROPRIETARY ACCOUNT.

Balance due to the Treasurer..... £306.

ORDINARY ACCOUNT.

Disbursements.	£.	s.	d.	Receipts.	£.	s.	d.
To Balance due to Treasurer	153	12	9	By Balance in the Hands of the Sub-Curator	3	18	10
Sub-Curator's Salary and Expenses	100	0	0	Subscriptions of 103 Members	216	12	0
Insurance	8	12	6	Subscriptions of 63 Annual Subscribers.....	66	3	0
Tradesmen's Bills.....	39	11	1½	Deposits and Subscriptions of Two New Members.	10	10	0
Books and Stationery	36	3	6	Fines.....	3	1	0
Printing and Advertising	20	3	6	Arrears.....	19	1	0
Taxes	25	8	9	Rent of Cellars under the Hall	25	0	0
Coal Gas.....	25	14	5	Dr. Grant's Lectures.....	5	15	0
Coals and Coke.....	5	19	4½	Professor Johnston's Lectures	8	8	0
Purchase and Carriage of Specimens	10	8	6	Mr. Haydon's Lectures	8	14	0
Sundry Expenses, Letters, Doorkeeper, &c.	12	15	10½	Use of Committee-Room	0	5	0
Dr. Grant, for Ten Lectures	52	10	0				
Professor Johnston, for Eight Lectures	52	10	0				
Mr. R. B. Haydon, for Six Lectures.....	31	10	0				
Contribution to the Expense of attempts to exempt Philosophical Societies from Taxes, &c.	5	0	0				
Interest to Banker	12	2	0				
	£592	2	3½				
				Balance due to Treasurer	£367	7	10
				Balance due to Treasurer	£224	14	5½

DONATIONS AND ADDITIONS

TO THE

SOCIETY'S MUSEUM.

*Those marked † are Members of this Society, thus * Honorary Members.*

GEOLOGY AND MINERALOGY.

- | | | |
|---|---|--|
| Several Geological Specimens from
the Tyrolean Alps, and one from
the Falls of Schaffhausen | } | † Mr. Nunneley, (<i>Secretary.</i>) |
| Fifteen Fossil Plants from Gristhorp
Bay, including Pecopteris William-
sonis, and dentata, Dictyophyllum
rugosum, Cyclopteris digitata, Otop-
teris acuminata, Zamia taxina, Pter-
ophyllum comptum, Equisetum late-
rale, and Tœniopteris vittata | } | † Mr. Wm. Sykes Ward. |
| Specimen of Lycopodites William-
sonis | } | * Mr. H. Denny. |
| Nine Mineralogical Specimens from
Cumberland..... | } | † The Rev. R. W. Hamilton,
(<i>President.</i>) |
| Two Hundred and Twenty Geological
Specimens from Torquay..... | } | † Mr. John Hey, F.L.S. F.G.S.
(<i>Curator.</i>) |
| Fine Specimen of Iron Pyrites in
Sandstone, from Garforth | } | Mrs. Wm. Hey. |

One Hundred and Seventy-Eight
Geological Specimens and Organic
Remains, from the Lias of Whitby
and Marlstone of Scarborough, in-
cluding *Ammonites elegans*, com-
munis, *Hawskerensis*, *exaratus*, an-
gulatus, *gracilis*, *armatus*, *Mulgra-
vius*, sub-armatus, *heterophyllus*,
vittatus, and *striatulus*; *Belemnites*
tubularis, communis; *Turbo undu-
latus*, *Inoceramus dubius*, *Pecten*
sublævis, *Cardium truncatum*, *Tere-
bratula tetrahedra*, *Nucula ovum*...

† Mr. T. P. Teale, F.L.S.
(*Curator.*)

ZOOLOGY.

Twenty Specimens of Invertebrate
Animals, including *Virgularia mira-
bilis*, *Pennatula phosphorea*, *Sepiola*
vulgaris, *Loligo sagittata*, *Cynthia*
glutinosa, *Doris verrucosus*, *Asci-
dium microcosmus*, *Leuconia com-
pressa*, *Scyllæa pelagica*, *Physalia*
pelagica, *Velella limbosa*,.....

* Professor Grant, University
College, London.

Specimen of the Dril or Wood Baboon
(*Maimon leucophæus*)

Purchased by the Society.

Specimens of *Actinia purpurea* and
Asterias rubens

† Rev. Joseph Holmes, A.M.

A Species of *Lamia* from Brazil.....

Miss Walker, Leeds.

Specimen of the Merlin (*Falco*
Æsalon)

† Mr. John Hey, F.L.S. F.G.S.
(*Curator.*)

Specimen of *Strix flammea* (White
or Barn Owl)

† Mr. Abraham Clapham.

One Hundred and Three Specimens
 of British Zoophytes and Sponges,
 from the Coast of Scarborough, in-
 cluding *Alcyonium parasiticum*,
echinatum; *Flustra foliacea*, car-
 basea, truncata, pilosa, membrana-
 cea, hispida, *Murrayana*, spinifera,
unicornis; *Tubulipora crustata*, ser-
 pens; *Discopora verrucaria*, hispida;
Cellepora pumicosa, skenei, ramu-
 losa; *Berenicea coccinea*, flava, utri-
 culata, nitida, variolosa; *Jania ru-*
bens, *Corallina officinalis*, *Cary-*
ophyllia Smithii, *Millepora poly-*
morpha, *Lobularia digitata*, *Tubu-*
laria indivisa, muscoides, ramosa;
Valkeria spinosa, *Thoa Beanii*,
Sertularia abietina, muricata, hale-
 cina, polyzonias, rugosa; *Dyname-*
na argentea, cupressina, pinnata,
filicula, tamarisca, rosacea, pumila,
operculata; *Thuiaria thuia*, articu-
lata; *Plumularia falcata*, pinnata,
frutescens, catharina; *Antennularia*
antennina, *Campanularia geniculata*,
dumosa, verticillata, dichotoma,
volubilis; *Serialaria lendigera*; *Cel-*
lularia plumosa, reptans, scruposa,
avicularia, ciliata; *Crisea eburnea*,
Notamialoriculata, *Eucratia cornuta*,
loricata; *Anguinaria anguina*, *Far-*
cimia fistulosa, *Halichondria papil-*
laris, ficus, fava, aculeata, ramosa;
Spongilla fluviatilis; *Grantia com-*
pressa, botryoides, ciliata, pulveru-
lenta, nivea, lacunosa, clavata, mul-
 ticavata

Mrs. John Hey.

Three Skins of Foreign Birds	}	Mrs. John Hey.
Two Specimens of the Spotted Gunnel (<i>Gunnellus vulgaris</i>)		
Specimen of <i>Actinia plumosa</i>		
Six Specimens of <i>Bullæa aperta</i>		
Specimen of <i>Priapulus caudatus</i>		
Skeleton of the Pine Martin (<i>Mustela</i> martes)	}	Mr. John Calvert.
Three rare British Birds, viz: Little Bittern (<i>Ardea minuta</i>), Glossy Ibis (<i>Ibis falcinellus</i>), Collared pratincole (<i>Glareola pratincola</i>) ...	}	Purchased by the Society.
Twelve Species of Foreign Birds, not before in the Society's Collection...		
Nine Specimens of Birds' Eggs	} Dr. Crosier, Newcastle.	

LIBRARY.

Twelfth, Thirteenth, and Fourteenth Reports of the Sheffield Philoso- phical Society	}	The Sheffield Philosophical Society.
Report of the Scarbro' Philosophical Society.....	}	The Scarborough Philosophical Society.
Twelfth and Thirteenth Reports of the Norfolk and Norwich Museum.	}	The Norfolk and Norwich Museum.
Buckland's Bridgewater Treatise, 2 vols. 8vo.....	}	Purchased by the Society.
Report of the Proceedings of the British Association for the Ad- vancement of Science, held at Dublin, 8vo.	}	Purchased by the Society.

- | | | |
|---|---|---|
| A Pamphlet on Paracyanogen and
the Paracyanic Acid | } | Professor J. F. W. Johnston,
the Author. |
| Report of the Committee of the
Doncaster Lyceum; or Literary,
Scientific, and Natural History
Society, for 1836..... | } | The Doncaster Lyceum. |
| Proceedings of the Zoological Society
of London, for 1836 | } | The Zoological Society of
London. |
| Scatcherd's History of Morley, 8vo. | } | Mr. John Heaton, Briggate. |

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Rev. William Buckland, D.D. F.R.S.
and G.S. &c. Professor of Mineralogy
and Geology in the University of
Oxford, *Oxford.*

Thomas Campbell, *London.*

William Carey, *London.*

John Dalton, D.C.L. F.R.S. Corres-
ponding Member of the French In-
stitute, *Manchester.*

Henry Denny, Hon. Member of the
Yorkshire Philosophical Society, and
of the Norfolk and Norwich Mu-
seum, *Leeds.*

J. Drake, M.D. *Cincinnati.*

William Hey Dykes, F.G.S. Honorary
Member of the Yorkshire Philoso-
phical Society, *Hull.*

John Field, *Low-Moor.*

Davies Gilbert, M.P. F.R.S. &c. &c.
London.

George Goldie, M.D. *York.*

Robert E. Grant, M.D. F.R.S.L. & E.
F.L.S. G.S. Z.S. W.S. &c. &c. Pro-
fessor of Comparative Anatomy and
Zoology, in the University of Lon-
don, *London.*

Robert Hall, A.M. Barrister-at-Law,
London.

Luke Howard, F.R.S. *Ackworth.*

J. F. W. Johnston, A.M. F.R.S. &c.
Reader in Chemistry and Mine-
ralogy, in the University of Dur-
ham, *Durham.*

Robert Leyland, *Halifax.*

Wm. M. Maude, *Knoctrop.*

Thomas Meade, F.R.S. *Chatley-Lodge.*

James Montgomery, Hon. Member of
the Yorkshire Philosophical Society,
Sheffield.

John Phillips, F.R.S. & F.G.S. Pro-
fessor of Geology to King's College,
London, Hon. Member of the York-
shire, Hull, Sheffield, and Halifax
Philosophical Societies, *York.*

Benjamin Rotch, F.A.S. *London.*

Thomas Robinson, *Leeds.*

Rev. Samuel Sharp, A.M. *Wakefield.*

Wm. Smith, D.C.L. Mineral Surveyor,
Scarborough.

James De Carle Sowerby, F.L.S. &c.
London.

John Spear, *London.*

Thomas Stewart Trail, M.D. F.R.S.
Professor of Medical Jurisprudence,
in the University of Edinburgh.

Rev. W. V. Vernon Harcourt, F.R.S.
& G.S. Vice-President of the York-
shire Philosophical Society, *Bishop-
thorpe.*

Charles Waterton, Hon. Member of
the Yorkshire Philosophical Society,
and Bristol Institution, *Walton Hall.*

John K. Walker, M.D. *Huddersfield.*

The Ven. Francis Wrangham, M.A.
F.R.S. Archdeacon of Cleveland,
Prebendary of York and Chester,
F.C.P.S. Honorary Member of the
Yorkshire and Hull Philosophical
Societies, *Hunmanby.*

Rev. G. Young, A.M. M.W.S. Hon.
Member of the Newcastle, York-
shire, and Hull Philosophical Socie-
ties, *Whitby.*



NINETEENTH REPORT

OF

THE COUNCIL

OF THE

LEEDS

PHILOSOPHICAL AND LITERARY

SOCIETY,

AT THE CLOSE OF THE SESSION,

1838-9.

LEEDS :

PRINTED BY EDWARD BAINES AND SONS.

—
MDCCCXXXIX.

REPORT OF THE COUNCIL,

AT THE

CLOSE OF THE NINETEENTH SESSION.

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It is a source of much pleasure to the Council of the Leeds Philosophical and Literary Society, that in presenting the Annual Report at the close of the Nineteenth Session, they are enabled to congratulate its Members upon the improved condition of the Institution. It has too frequently happened in past years, that the retiring Council could do little more than report the Society, if not actually in a declining state, at least in a not very flourishing and active one ; during the year just closed, however, increased activity has prevailed in all the Society's concerns.

At the termination of the last session there remained on the ordinary account a balance due to the Treasurer amounting to the sum of £224 14s. 5½d. ; this debt, which had gradually augmented, had been for long a cause of much regret to many Members, as it prevented the expenditure of even small sums for any other purposes, however desirable in themselves they might be, than those which were absolutely essential to the carrying

on of the business of the Society. Now, happily, the debt no longer exists, the sum necessary for its liquidation having been transferred from the Subscription Fund to the ordinary account ; and such has been the increase in this year's receipts, arising from the admission fees and subscriptions of 34 new members and 20 subscribers, that although the sum of £80 has been devoted to alterations of cases, stands for specimens, &c., rendered necessary by the re-classification and re-arrangement of the zoological department of the Museum, there is still a small balance in the hands of the Treasurer.

During the session two courses of lectures have been delivered ; the one of six lectures by B. R. HAYDON, Esq., "On Painting," being a continuation of the course delivered during the previous session ; the other also a course of six lectures, "On the early English Opera," with illustrations, by EDWARD TAYLOR, Esq., Gresham Professor of Music. Both these courses were very popular and well attended. On referring to the Treasurer's account as it may probably be noticed that the nominal receipts for the admission of strangers to these lectures bears but a small ratio to the great outlay, it may be proper to explain that this is only apparent, and that the actual receipt from these lectures has been very large, as they were the means of inducing many persons to become Members who had not heretofore been connected with the Society.

The attendance at the ordinary General Meetings has throughout the session been larger than for many years, and the papers read have been at least equal in interest and importance to those of any previous session. Before the commencement of the session, the Council adopted the plan of printing upon a card the names of the authors, with the titles, and the dates fixed for reading their respective papers. This, which on account of the insufficient supply of papers could not be accomplished until the present year, has been so successful, that the retiring Council would recommend its adoption to their successors. While the due supply of papers, with a knowledge of the subjects about to be brought under discussion, is almost certain to draw large audiences, a good attendance is a powerful incentive to the production of interesting and important papers. From a comparison of the subjoined list of papers read before the Society with the sessional card, it will be seen that, with two exceptions only, they are the same. Dr. MAYNE kindly supplied the place of Mr. NEVINS, whose health did not permit his appearance: the other alteration was occasioned by Mr. WILDSMITH politely withdrawing his communication, to afford Mr. CHANTRELL an opportunity for reading (before its appearance elsewhere) an interesting account of the old Parish Church.

Only two of the evenings devoted to the Private Meetings have been occupied: this is explained by

the circumstance of many of the papers for which these Meetings were more expressly instituted being presented in the Sectional Meetings. The titles of the papers read at the General Meetings are—

1. "On the Olympic Games"—by the Rev. R. W. Hamilton, President.—(Read Oct. 19th, 1838.)
2. "On the Ancient British Games"—by Dr. Hunter.—(Read Nov. 2nd, 1838.)
3. "On the Dispositions and Mental Endowments of Man"—by Mr. Hare.—(Read Nov. 16th, 1838.)
4. "An Inquiry into the Identity of Instinct and Reason, and how far they are dependent upon the greater or less Development of a Central Nervous Mass,"—by Mr. Nunneley, Secretary.—(Read Dec. 7th, 1838.)
5. "On the Requisite Arrangements for a Meeting of the British Association in Leeds,"—by Mr. West, Vice-President.—(Read Dec. 21st, 1838.)
6. "On Animal Magnetism,"—by Mr. Wm. Osburn, Curator.—(Read Jan. 4th, 1839.)
7. "On Sergeant Talfourd's Plays and Modern Imitations of the Ancient Drama,"—by Rev. Charles Wicksteed, B.A., (Read Jan. 18th, 1839.)
8. "On Respirable Air and its uses in the Maintenance of the Human Economy, and on the injurious Effects of Inhaling Air that is Vitiating or Non-respirable,"—by Dr. Mayne.—(Read Feb. 1st, 1839.)
9. "On the Importance and Advantage of a regulated System of Colonization,"—by J. G. Marshall, Esq., F.G.S., Curator.—(Read Feb. 15th, 1839.)
10. "On the Cephalopoda,"—by Mr. T. P. Teale, F.L.S., Curator.—(Read March 1st, 1839.)
11. "On the Retroactive Influence of Language upon Thought,"—by Mr. John Wilkinson.—(Read March 15th, 1839.)

12. "On the Theory of Circumstantial Evidence,"—by Mr. J. H. Shaw, Vice-President.—(Read April 15th, 1839.)
13. "An Historical Account of the late Parish Church of Leeds, with some Observations relative to the Ancient Fragments discovered during the Removal of various Parts of the Building,"—by Mr. R. D. Chantrell.

#### PRIVATE MEETINGS.

1. "On the Auxiliaries of the Future Tense in the English Verb,"—by the President.—(Read Jan. 11th, 1839.)
2. "On the Oxy-hydrogen Microscope,"—by Mr. Wm. Sykes Ward, (Read March 8th, 1839.)

During the session the sittings of the sections on Geology and Statistics, (the only two yet formed) have been regularly continued. That their labours have been neither devoid of interest nor usefulness, the Reports of their Proceedings in the annexed Appendix will show.

The visiter to the Museum cannot have failed to notice the improvement which has been partially commenced, and which, as the necessary funds are now obtained, will, it is confidently hoped, be completed during the approaching summer. Although the collection of objects worthy of preservation has been gradually augmenting, the appearance and interest of the Museum has by no means kept pace with them. This has arisen from several causes; two circumstances have, however, proved the greatest obstacles, viz. the arrangement of the Museum not being in accordance with the present state

of science, and the confined and ill-contrived construction of the cases—the latter defect being in a great measure the cause of the former. So serious has been the want of space, that it has been necessary to place many important and valuable donations in boxes and drawers out of sight, there not being room to exhibit them in a suitable manner. This, as might have been expected, has acted in a most prejudicial manner: not only has it detracted much from the interest of the Museum, but it has prevented a repetition of presents, donors not choosing to transmit specimens to be placed out of sight in inaccessible places, where, however safe they may be so far as their preservation is concerned, they are quite valueless to the scientific visiter and to the inquiring student.

To remedy these defects had long been anxiously desired, but, until the present time, the want of the necessary funds has proved an insuperable barrier. During the past winter a Committee was formed by the Council of this Society, in conjunction with several other gentlemen, to ascertain if it were possible to raise a large and commodious public building on a grand scale, in which the Society might be furnished with increased accommodation: after various meetings, it being found that sufficient encouragement was not given to justify a hope that the plan would be carried into effect, it has been finally abandoned.

It is now proposed to make such alterations in the Hall as will afford not only considerably more room, but also of a kind better suited for the arrangement and exhibition of the specimens. This will be accomplished by converting the large room in which at present the antiquities are deposited, into the Geological Museum ; to adapt it for which purpose it will be necessary to build up the windows, and to admit the light from the roof by lanthorns, by which a very considerable space of wall room will be gained for the receiving cases. The antiquities, and other artificial objects of curiosity, will then be transferred to the present mineral room, &c. The estimated cost of these alterations, and repairing the roofs and sky-lights over the zoological and mineral rooms, which are in a most defective condition, (having been badly constructed at first) is rather more than £700. To raise this sum, and to liquidate the debt, a subscription was a few weeks since commenced among the Members and friends of the Society. So liberal have been the responses to this application, that the sum already received is such as to justify the alterations being immediately undertaken. It is, therefore, anticipated that ere the commencement of another session, the Museum will have assumed an appearance which need not fear the critical examination of the scientific visiter. Leeds has for long, both in the number of its inhabitants and in its commercial importance, ranked as the metro-

polis of the West Riding of Yorkshire, and the equal of the most important towns in England. Surely then, the support of its scientific and literary institutions ought to be at least commensurate with those of other places. Let the success of the past session be but the harbinger of increased exertion for the future, and we shall no longer hear the inhabitant complain that there is nothing to show the visiter, nor the stranger that Leeds contains no object of interest, save the dirty and smoky manufactories.



## APPENDIX.

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### REPORT OF THE GEOLOGICAL SECTION.

The proceedings of the Geological Section, though not yet continued for a sufficient length of time to afford results deserving a permanent and detailed record, have created an increased activity in the collection of specimens, and of information calculated to illustrate the geology of the more immediate neighbourhood of Leeds. Mr. Embleton has presented the Museum with a complete suite of specimens of the coal measures sunk through at the Middleton collieries; a number of sections and borings from Mr. T. Bedford and others have been collected and compared: a commencement has been made in ascertaining and laying down upon the map some of the principal lines of fault and out crop of the strata; a bed of shale, sunk through in a newly-opened shaft at the Middleton collieries, has furnished many interesting specimens of the teeth, scales, and spines of fishes, and will probably repay the continued search now making for this important class of organic remains.

The Section has continued to increase in numbers, and the meetings have in general been well attended.

### REPORT OF THE STATISTICAL SECTION.

The President, in the name of the Section, has pleasure in presenting to the Council of the Society, the First Annual Report of its Proceedings, in accordance with the 4th rule.

The number of Members at its establishment was eight, at present it is twenty-one.

Fourteen Meetings have been held, and the following, taken from the minutes of the proceedings, are the subjects which have engaged the attention of the Members, and on which papers have been presented:—

A Sketch of the Subjects for Statistical Inquiries,—by Mr. Hare.

A Paper of a similar nature,—by James G. Marshall, Esq.

A document from Mr. Shepherd, of Wakefield, showing the Commitments to the House of Correction for 1835-6-7, with the effects of the different punishments indicated by the re-commitments; also the ages of those committed during the past year.

Return relative to the Schools attached to the Manufactory of Messrs. John Marshall and Co.—by J. G. Marshall, Esq.

Papers on the Medical Charities of the Town—by Mr. Wildsmith.

A Paper on the “Strike” among the Workmen in the Woollen Manufacture in the years 1833-4,—by Mr. Plint.

A Paper on the Nature and Objects of Statistical Inquiries,—by Jas. G. Marshall, Esq. It was subsequently resolved, that this paper should be sent to the London Society for insertion in the *Statistical Journal*, which, with the consent of Mr. M., was accordingly done.

A Paper on the Criminal Statistics of the Borough, for 1838; showing the Police and other Charges, with a Classification of the age, sex, residence, and crime of the Offenders, with the Acquittals and Punishments awarded,—by Mr. Hare.

The following subjects are undertaken and in progress, viz :—

The Population Returns for the Borough,—by Mr. West.

A Catalogue of the Statistical Works in the Libraries, &c. of the Town,—by Mr. Marcus.

The Past and Present State of the Medical Charities of the Town,—by Mr. Wildsmith.

The Charitable Institutions, exclusive of the Medical Charities,—by Mr. Simes.

A Statement of the Bankruptcies and Insolvencies of the Borough,—by Mr. Bolton.

Returns of the Sunday Schools in the township of Hunslet,—by Mr. Jay, Jun.

Returns relative to the Woollen Manufacture,—by Mr. S. Walker.

There has been a correspondence with the London and other Statistical Societies, and a mutual assurance of co-operation has been given and received.

The *Statistical Journal* is received, and regularly circulated among the Members.

The Section has not employed any paid agent, deeming it more desirable to make themselves acquainted with the working out of some of the subjects, especially as the funds are inadequate to the purpose, the subscription being only 5s. per annum, those Members who think proper subscribing a larger sum.

As the future success of the Section depends much upon the active exertions of its members, they are earnestly requested to take an early opportunity of selecting such subjects as are most interesting to them for investigation ; thus the statistics of this important borough may be added to those of other towns where this science is exciting considerable interest.

On behalf of the Section,

April 20th, 1839.

S. HARE, CHAIRMAN.

# LEEDS PHILOSOPHICAL AND LITERARY SOCIETY.

## PROPRIETARY ACCOUNT.

Balance due to the Treasurer..... £321 9s. 0d.

## ORDINARY ACCOUNT.

### Disbursements.

|                                                | £.         | s. | d.  |
|------------------------------------------------|------------|----|-----|
| To Sub-Curator's Salary and Expenses .....     | 100        | 0  | 0   |
| " Insurance .....                              | 8          | 12 | 6   |
| " Tradesmen's Bills for Ordinary Purposes..... | 39         | 7  | 11½ |
| " Ditto ditto for Hot Air Apparatus.....       | 11         | 11 | 0   |
| " Ditto ditto for Museum.....                  | 80         | 0  | 0   |
| " Books and Stationery .....                   | 26         | 11 | 6   |
| " Printing and Advertising .....               | 27         | 10 | 0   |
| " Taxes.....                                   | 23         | 11 | 3   |
| " Coal Gas .....                               | 19         | 15 | 3   |
| " Coals and Coke .....                         | 16         | 13 | 10  |
| " Purchase and Carriage of Specimens .....     | 3          | 4  | 1   |
| " R. B. Haydon, Esq. for Six Lectures .....    | 31         | 10 | 0   |
| " Edward Taylor, Esq. for Six Lectures .....   | 42         | 0  | 0   |
| " Expenses attendant on ditto .....            | 46         | 3  | 6   |
| " Doorkeeper .....                             | 2          | 16 | 0   |
| " Sundry Expenses, Postage, &c. ....           | 14         | 3  | 0½  |
| " Interest to Banker.....                      | 16         | 11 | 0   |
| " Mr. G. K. Hirst, for Glass Cases .....       | 9          | 0  | 0   |
| " Balance due to the Treasurer .....           | 224        | 14 | 5½  |
|                                                | £743 15 4½ |    |     |

### Receipts.

|                                                  | £.  | s. | d. |
|--------------------------------------------------|-----|----|----|
| By Balance in the Hands of the Sub-Curator ..... | 8   | 12 | 6½ |
| " Subscriptions of 106 Members .....             | 222 | 12 | 0  |
| " Subscriptions of 73 Annual Subscribers.....    | 76  | 13 | 0  |
| " Deposit of 34 New Members .....                | 107 | 2  | 0  |
| " Subscription of 33 New Members .....           | 69  | 6  | 0  |
| " Arrears .....                                  | 28  | 15 | 0  |
| " Fines .....                                    | 6   | 11 | 0  |
| " Rent of Cellars under the Hall.....            | 25  | 0  | 0  |
| " R. B. Haydon, Esqr.'s Lectures .....           | 5   | 5  | 6  |
| " Edward Taylor, Esqr.'s Lectures .....          | 16  | 9  | 0  |
| " From the Museum Fund.....                      | 224 | 14 | 5½ |

£791 0 6

# DONATIONS AND ADDITIONS

## TO THE

## SOCIETY'S MUSEUM.

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Those marked † are Members of this Society; thus • Honorary Members.

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### GEOLOGY AND MINERALOGY.

Thirty-five fine Specimens of Vegetable Remains, from the Low Moor Coal Field..... } Mr. Hemsworth.

A Collection of Irish Minerals, including Specimens of Galway Marble, Kilkenny Marble, Yellow and Gray Sulphate of Copper, Anthracite, Sulphuret of Iron, Oxyde of Iron with Quartz, Clay Slate, Granite, and Precipitate of Copper from the Water of Connorre Mine ..... } Mr. T. W. Embleton,  
*Middleton.*

Contorted Specimen of *Stigmaria Ficoides*, from Rothwell Haigh ... } Mr. Henry Teal, *Stourton-Lodge.*

*Sternbergia transversa*, from Weetwood; several Specimens of *Stigmaria ficoides*, showing the Central Axis; *Sphenopteris obtusifolia*, *Lepidodendron selaginoides*, *Odontopteris Braidii*, from Newton Colliery; Calamite in Flagstone, from Gipton; Fish Scales, &c. from the Shale of Middleton Colliery; Twenty-two Fossils, from the Speeton Clay; Seven from the Red Chalk of Filey..... } † Mr. T. P. Teale, F.L.S.  
Curator.

- Molar Tooth of the Mastodon, (*Mastodon giganteum*).. } Purchased by the Society.
- Very fine Specimens of *Calamites cannaeformis*, from Chapel-allerton ..... } † Mr. Thomas Pease.
- Sixteen Geological Specimens from the Mountain Limestone of Skipton; Bath Oolite and Sandstone of Temple-newsam ..... } † Mr. J. R. Hubbard.
- Very fine Mass of Dendritical Iron Pyrites in Slate, and a Series of Specimens of Slate from Ingleton } † J. G. Marshall, Esq., F.G.S. Curator.
- Specimen of Anthracite from Carlow } † Mr. J. P. Sanderson.
- Several Geological Specimens from the Coal Measures of Morley and Gildersome; Galena from Harrogate; Mass of Sandstone, containing *Trigonocarpa*; Spine of *Gyracanthus*, in Stone Coal, from Gildersome ..... } Mr. Drabble, *Holbeck*.
- Fine Specimens of *Calamites cannaeformis* and *decoratus*, from Chapel-allerton ... } Mr. John Farrar, jun.
- Specimen of *Stigmaria ficoides*, from Thorp Hall, showing the Central Axis ..... } Mr. J. Middleton, *Hunslet*.
- Phosphate of Lead and Elastic Bitumen, from Castleton, Derbyshire ..... } Mr. J. D. Heaton.
- Twenty Fossils from the Vale of Todmorden .... } Mr. Samuel Gibson, *Hebden-bridge*.
- Fifty Organic Remains, from the Inferior Oolite, Kelloway's Rock, Mountain Limestone, Portland Oolite, and Chalk; Native Asphaltum, and Granite from Leicestershire ..... } † Mr. J. R. Hubbard.

- Fossil Fish, *Ammonites elegans*, heterophyllus & ovatus, *Nautilus liatus*, *Belemnites tubularis*; Lias marle, containing *Belemnites*, portion of the vertebral column of the *Ichthyosaurus*, from the Lias of Whitby; Serpentine, Zoisite, Galena, from Alston Moor and Swaledale, Oxydulated Iron, *Hæmatite*, Specular Iron from Elba, Blende, Arragonite, Arseniate of Lead, Aluminous Sulphate of Iron, Pearlspar, Carbonate of Lead, Rauchwache, &c..... } Rev. R. W. Hamilton, (President.)
- Stigmaria ficoides*, and Nodules of Ironstone from Gildersome .. .. } Mr. Bedford.
- Calamites cannaëformis*, from Pot-ternewton..... } † Mr. R. D. Pawson.
- One hundred and forty Specimens, illustrative of the Sinkings at Middleton Colliery..... } Mr. T. W. Embleton, *Middleton*.
- Scales and Teeth of *Megalichthys Hibberti*, from the Cannel Coal of Wigan, Lancashire... .. } Mr. William Peace.
- Stigmaria ficoides*, from Halifax ... } † Mr. Sparke George.
- Specimen of Burdiehouse Lime-stone, containing *Lepidostrobus* ... } † Mr. J. R. Hubbard.
- Fine Specimens of Native Copper Ore, from Devonshire..... } Mr. Potter.
- Branched Specimen of *Stigmaria*, from Burley, and Lead Ore from Cumberland... .. } † Mr. Nunneley, Secretary.
- Two Casts of the Fossil Footsteps of the *Cheirotherium*, and of some Unknown Animals, from a Slab of New Red Sandstone, raised in Stourton Hill Quarry, Cheshire... } † Messrs. March and Maclea.

- Two Fossils belonging to a Species  
of Cephalopod, from the Magne-  
sian Limestone of Garforth, and  
Specimens of Cypris in Shale,  
from Colton ..... } Mr. S. H. Fletcher, *Garforth*.
- Pecten variabilis, Buccinum elonga-  
tum & crispatum, Murex con-  
trarius, Natica glaucinoides, from  
the Suffolk Crag; Terebratula and  
Ventriculites radiatus, from the  
Chalk of Suffolk ..... } Mr. G. Hubbard, *Bury,  
Suffolk*.
- A Collection of Teeth and Scales of  
Fishes and Coprolites, from the  
Shale of Middleton Colliery ..... } Messrs. T. W. Embleton,  
Sparke George, J. R. Hub-  
bard, N. P. Simes.
- Three Ferns, Specimens of Gonia-  
tites Listeri, and several other  
Shells from the Halifax Coal Field } Mr. Abraham Jubb, *Halifax*.
- Ulodendron minus, two Species of  
Neuropteris, one of Pecopteris,  
Uniones, &c. from Low Moor..... } † Mr. Sparke George.
- Twelve Specimens of Organic Re-  
mains from the Burdiehouse Lime-  
stone..... } Dr. Knox, *Edinbro'*.
- Specimens of Wood and Hazel Nuts  
found in sinking a well at St.  
Peter's Hill ..... } Mr. Simon Harker.

## ZOOLOGY.

- Fine Specimen of Chelonia Caouana } Rev. R. W. Hamilton, (Presi-  
dent.)
- Specimen of the Monitor Lizard,  
(Monitor Niloticus)..... } Mr. John Calvert.
- Skeleton of the Llama, (Auchenia  
Glama)..... } † Mr. Wm. Hey.
- Specimen of the Teal (Anas Crecca) } † Mr. Thos. England.



- Specimen of *Ploceus Aurantius*,  
(Weaver Bird)..... } † Mr. Thomas Pease.
- Pair of the *Sylvia Trochilus* (Willow  
Wren) ..... } Mr. Pemberton.
- Specimen of *Agama Cornuta*, *Hyla*  
*Viridis*, three Snakes, and several  
Insects from North America ... } † Mr. S. Smith.
- Specimen of the Minx (*Mustela lu-*  
*treola*) from Hudson's Bay ... } Mr. Wm. Waite, Commercial-  
street.
- Specimens of the Roach, Dace,  
Flounder, Bull-trout, Trout, and  
Samlet; and of *Beroe pileus*, and  
*Aphrodita aculeata* ... } † Mr. T. P. Teale.
- Specimens of the Grayling (*Thymal-*  
*lus vulgaris*) ..... } † Mr. Joseph Teale.
- Three British Birds, viz. Quail (*Per-*  
*dix coturnix*), Wood Sandpiper  
(*Totanus glareola*), Golden Plo-  
ver (*Charadrius pluvialis*) ..... } † Mr. John Heaton.
- Two Centipedes, Scorpion, and a  
Species of *Diodon*, from the West  
Indies ..... } Miss Lupton.
- Specimens of the Gray Gurnard,  
Dab, Spotted Gurnel, *Actinia*  
*Plumosa*, *Actinia Coriacea*, and  
*Actinia Crassicornis*, *Lobularia*  
*digitata*, *Balanus Scoticus*, *Aste-*  
*rias papposa*, *Doris*, &c..... } † Mr. E. J. Teale.
- Several Eggs of British Birds ..... } † Mr. Abraham Clapham.
- Alimentary Canal of the Boa Con-  
strictor ..... } Mr. Lalouette.
- Specimen of the Crowned Crane  
(*Balearica Pavonina*) ..... } Mr. Wombwell.
- Pair of the Cross Beak, (*Loxia Cur-*  
*virostra*)..... } Mr. Frederick Green.

- A Series of Preparations illustrating the Structure of the Genus *Actinia* ..... } Mr. T. P. Teale.
- One hundred and twenty Specimens of Foreign Insects; four hundred Specimens of British Insects, and twenty Specimens of British Plants ..... } Rev. F. O. Morris, *Ordsall Rectory*.
- Variety of the Common Pheasant (*Phasianus Colchicus*) ..... } Mr. Thomas Gill, *Bramhope*.
- Two Teeth of a Species of *Physeter* } Purchased by the Society.
- Two Snakes, viz. the *Counacouchi*, or Bush-Master, and the *Labarri* Snake, from *Demerara* .. ..... } Messrs. J. & R. Hick.
- Preserved Specimen of the Pike (*Esox lucius*) ..... } Mr. Edwin Lankester, *Camp-sall*.
- Fine Specimen of the Bittern (*Botaurus Stellaris*) ..... } T. B. Pease, Esq. .
- Specimen of the Speckled Diver (*Colymbus Septentrionalis*) ..... } Mr. Henry Tarbotton.
- A Monkey and Racoon ..... } Mr. Wombwell.
- Skull of the Two-horned Rhinoceros of the Cape, (*Rhinoceros bicornis*) } Mr. T. P. Teale.
- Skeleton and Preserved Skin of the Gray Ichneumon (*Ichneumon griceus*) ..... } Purchased by the Society.
- Skull of the Babyrussa (*Sus-babyrussa*); and a very large Pair of Shark's Jaws ..... } Mark Heseltine, Esq., *Swine, Holderness*, by Mr. Wm. Osburn, jun. ; M. R. S. Lit. Curator.
- Pair of the Weasel (*Mustela vulgaris*) ..... } † Mr. E. J. Teale.
- Very fine Skin of the South African Lion, Pale variety (*Felis Leo*) ... } James Musgrave, Esq.
- Specimen of the Gannet (*Sula Basanus*) in the plumage after the second moult, shot near Bradford } Mr. Charles Lupton.

- A Series of Specimens, exhibiting  
the brain, with optic nerves, eyes,  
tentacula, cartilaginous rings from  
the suckers of ditto, beaks, and  
respiratory apparatus of *Loligo*  
*Sagittata*; Specimens exhibiting  
the internal structure of *Asterias*  
*rubens* and *Solen siliqua*..... } † Mr. T. P. Teale.
- Specimens of *Paludina vivipara*, *He-*  
*lix caperata*, and *Carthusiana* ..... } Mr. S. H. Fletcher, *Garforth*.
- Specimen of the Greater Bird of  
Paradise (*Paradisapoda*), and } † Mr. Wm. Sykes Ward.  
Blue Creeper (*Certhea Cærulea*)..
- Pair of the Pied Wagtail (*Motacilla*  
*alba*)..... } Mr. Edward Green.
- Common Shrew (*Sorex araneus*) ... } Mr. T. P. Teale.
- Stoat (*Mustela erminia*) ..... } Mr. H. Denny.
- Specimen of the Italian Greyhound }  
(*Canis Grajus*)..... } Mr. Obadiah Brooke.
- Specimen of *Dynamene operculata* } † Mr. R. D. Pawson.
- Pair of the Gray Wagtail (*Motacilla*  
*Boarula*); Pair of the Red-backed } Purchased by the Society.  
Shrike (*Lanius Collurio*) .....

## MISCELLANEOUS.

- Forty-nine Casts of Ancient Regal,  
Corporate, and Monastic Seals ... } Mrs. Edward Cookson.
- Quarter Franc of Louis Philippe 1st,  
and Roman Copper Coin of An- } † Mr. J. P. Sanderson.  
toninus .....
- War Cloak and Weapon from the } Mark Heseltine, Esq., *Swine*,  
South Seas ..... } *Holderness*, by Mr. William  
Osburn, jun.
- Two Blow-pipes, two Quivers of  
Poisoned Arrows, Baskets for  
carrying Wild Cotton, &c., used } Messrs. J. & R. Hick.  
by the Natives of Macoushia,  
Guiana .....

|                                                                                                                                                                                                    |                                                            |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------|
| Twenty Glass Retorts, two dozen<br>Test Tubes, nineteen Jars, and<br>other Glass Apparatus for Chemi-<br>cal Experiments .....                                                                     | } Wm. Aldam, jun. Esq.                                     |
| Dagger and War Club from Singa-<br>pore .....                                                                                                                                                      | } †Mr. William Osburn, jun.                                |
| Indian Drum or Tomtom, from South<br>America .....                                                                                                                                                 | } Mr. Arthur Maude, <i>Knostrop</i> .                      |
| A Rangoon Samii or Idol, Specimen<br>of the Secheyelles Islands or<br>Double Cocoa Nut (Coco de mer),<br>Specimen of Wood Opal from Van<br>Diemen's Land, and Native Cloth<br>from Madagascar..... | } Dr. Henderson, R.N. <i>Edinbro'</i> ,<br>† by Mr. Price. |

## BOOKS.

|                                                                                                                                                                           |                                                         |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------|
| Reports of the Birmingham Philo-<br>sophical Institution for 1837 and<br>1838 .....                                                                                       | } The Birmingham Institution.                           |
| Reports of the Royal Cornish Insti-<br>tution for 1836, 1837, and 1838 ;<br>Laws of ditto; the Cornish Fauna<br>—by Jonathan Couch.....                                   | } The Cornish Institution.                              |
| Scripture Geology, or an Essay on<br>the High Antiquity ascribed to<br>the Organic Remains imbedded in<br>Stratified Rocks, by the Rev. G.<br>Young, D.D. 1 vol. 8vo..... | } Presented by the Author.                              |
| Twelve Numbers of the Naturalist..                                                                                                                                        | } Neville Wood, Esq., the Editor.                       |
| Annual Report of the Scarbro' Phi-<br>losophical Society for 1838 .....                                                                                                   | } The Scarbro' Philosophical<br>Society.                |
| Two Copies of a Guide to an Ar-<br>rangement of British Birds .....                                                                                                       | } Rev. F. O. Morris, <i>Ordsall</i><br><i>Rectory</i> . |
| Practical Observations on the Causes<br>and Treatment of Curvatures of<br>the Spine, 1 vol. 8vo. 1839 .....                                                               | } † Mr. Hare, the Author.                               |
| Proceedings of the Zoological So-<br>ciety of London for 1837 ... ..                                                                                                      | } The Zoological Society.                               |

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# TWENTIETH REPORT

OF

## THE COUNCIL

OF THE

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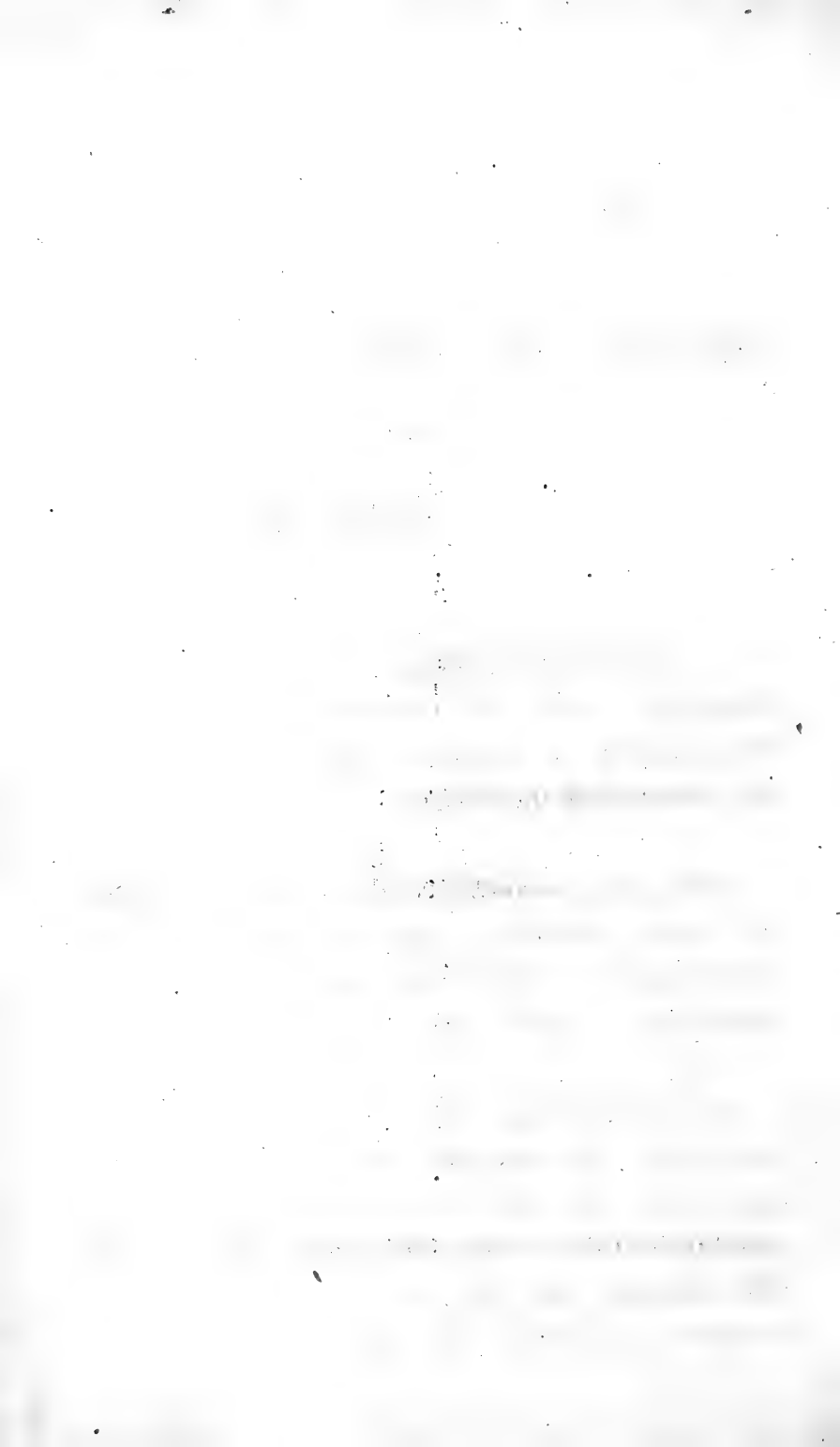
AT THE CLOSE OF THE SESSION,

1839-40.

LEEDS.

PRINTED BY R. PERRING, COMMERCIAL-STREET.

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# REPORT OF THE COUNCIL,

AT THE

CLOSE OF THE TWENTIETH SESSION.

IN presenting the Report, at the close of the Twentieth Session, the Council is happy in again being enabled to congratulate the Members upon the prosperity of the Society.

During the Session twelve new ordinary members, and sixteen subscribers, have been enrolled. Earl FITZWILLIAM and B. R. HAYDON, Esq., have been unanimously elected honorary members.

The ordinary funds of the Society are in a satisfactory state. For the first time during many years the receipts have exceeded the expenditure; and were it not that Mr. Knight's account for printing and publishing the first volume of the Society's Transactions has been this year taken into the

general account, a surplus would have remained in the hands of the Treasurer. In connection with the publication of the Transactions, it may be right to mention, that although the work has not yet paid its expenses there is no reason to regret the issuing of it ; those who know anything of such subjects are well aware that the extent of sale is by no means a just criterion of the merits of a work. That this volume has increased the reputation of the Society at a distance from Leeds is certain, for all the journals and reviews which have noticed it, have spoken in terms of high commendation of the papers it contains, as being not merely respectable, but likely to advance science ; and were every one who is connected with the Society to take a copy, (and which, in determining to publish, the Council were justified in expecting would be done, as it is only by such means the expenses can ever on such works reasonably be expected to be paid,) the balance would, in money as well as credit, be in favour of the Society.

During the session two courses of Lectures have been delivered. The first by an old acquaintance, Mr. HAYDON, "On the History of Painting," may properly be considered as being the continuation and completion of the courses delivered by him during the

two previous sessions. The second course, "On Organic Chemistry," was delivered by our esteemed and distinguished friend, Professor JOHNSTON. Both were well attended.

The Papers read at the ordinary meetings of the Society have presented the usual variety in subject, and have been of equal interest and talent to those of any former session. The attendance throughout the season has, on the whole, been very good; this may, in part, at least, be attributed to the continued use of the sessional card, adopted for the first time last year. The papers were as follow :

1. "On the Classical Comedy compared with that of Shakspear,"—by the Rev. R. W. Hamilton, President.—(Read October 18th, 1839.)
2. "On the Identity of Matter,"—by Mr. Nunneley, Secretary.—(Read November 1st, 1839.)
3. "On the Spirit of Modern Philosophy,"—by Mr. Rodgers.—(Read November 15th, 1839.)
4. "On the Study of Antiquities in Connexion with Science and the Useful Arts,"—by Mr. J. I. Ikin.—(Read December 6th, 1839.)
5. "On the Statistical Condition of the People,"—by Mr. Robert Baker.—(Read December 20th, 1839.)
6. "On the Limits of Possible Knowledge,"—by the Rev. G. A. Poole, M.A.—(Read January 3rd, 1840.)

7. "On Light,"—by Mr. W. S. Ward.—(Read Jan. 17th, 1840.)
8. "On Goëthe's Faust,"—by Mr. Marcus.—(Read Feb. 7th, 1840.)
9. "On the Literature of Portugal, and more especially the Writings of Camoëns,"—by Mr. J. A. Boyes.—(Read Feb. 21st, 1840.)
10. "Hints on Steam Engine Boilers, Locomotive Engines, and Railways,"—by Mr. West.—(Read March 6th, 1840.)
11. "On Italian Architecture,"—by Mr. R. D. Chantrell.—(Read March 20th, 1840.)
12. "On certain Atmospherical Phenomena,"—by Dr. Chadwick.—(Read April 3rd, 1840.)
13. "On the Connexion between the Animal and Vegetable Kingdoms, as displayed in the Analogy of their Structure and Functions, and their Mutual Subserviency,"—by Dr. Kennion, of Harrogate.—(Read April 24th, 1840.)

The evenings set apart for the reading of shorter papers on more abstruse subjects, or such as might not, for various reasons, be thought suitable for the general meetings, have not been occupied; nor have the meetings of the geological and statistical sections been continued so regularly as they were during the previous year.

During the past year the Society has had to deplore the loss of two valuable members. To the one,—the late Mr. Gott, the Society has been from its commencement deeply indebted for the great interest



he felt, and the munificent pecuniary assistance he bestowed on its first formation. To his liberal exertions the Society in a great measure owes the erection of the building they are now assembled in, and many of the older members still remember the day on which the foundation stone was laid by him. The support he gave at first was never withdrawn; and although latterly he did not take so active a part as formerly in the management of the Society, yet, when required, up to the period of his decease his purse was always ready for the advancement of its usefulness. The other gentleman, Mr. Wildsmith, had been for many years an active member of Council, and at the time of his death filled, with much advantage to the Society, the office of Secretary.

In December last, the Society had the satisfaction of providing accommodation within its Hall for the meetings of a kindred institution, viz. the West Riding Geological and Polytechnic Society, when the Museum was visited by many of the best informed practical men in this district, who were much pleased with its arrangements, and the reception they met with. It is by such friendly communication that the best interests of science are likely to be most promoted.

It may be proper to remark that some slight alteration has taken place in the laws regulating the admission to the Museum, by which it is hoped greater facilities will be afforded to those who may wish to visit it, either for the purpose of curiosity, or for acquiring information. Annual tickets have been issued to those who, being neither members or subscribers, may yet wish for the liberty of visiting at their leisure the Museum; also single admission tickets are now used, by which any one who does not know a member, or does not wish to apply for gratuitous entrance, may be admitted. The price of the former is 5s., of the latter 6d.

In consequence of the increasing extent of the Museum, it has been thought advisable to provide some additional assistance to our valuable and indefatigable Sub-Curator, Mr. DENNY. Accordingly a Janitor, at a small weekly stipend, has been appointed, who, by being constantly in attendance, will be enabled more readily to attend to visitors; to assist in keeping the rooms and cases in better order; and also to execute many trifling, but necessary details which formerly encroached much upon the Sub-Curator's time, which may be so much more efficiently employed.

In last year's Report allusion was made to an application which was in progress on behalf of the Society, to raise, by voluntary contributions, a fund for the purpose of enabling the Curators to make certain improvements in the rooms of the Society devoted to the Museum. This call has been most effectually and liberally responded to, not only by the members, but by the public, and the sum of £1,020. 9s. has been subscribed, by which means very important alterations have been effected. The long room, which was formerly appropriated to the reception of antiquities and works of art, has been rendered more lofty. A new roof, with three lanthorn lights, has been substituted for the old one, and the side windows closed up, the want of a vertical light in this room having been long felt. Against the walls, new upright cases, upon the most approved principle, have been placed, by which means ample space is provided for the entire suite of organic remains already in the Society's possession, and which not only allow of their being inspected to greater advantage than heretofore, but by forming a continuous series, the student is enabled to view, in their relative connexion, the different groups characteristic of each formation—from the superficial and alluvial accumulations to the rocks of the silurian system. In the geological collection several valu-

able additions have been made during the session, some of which demand especial notice. A collection of bones from the celebrated cave at Kirkdale, has been obtained, which must always possess a local interest in a Yorkshire Museum, as well as a general interest to the geologist, from having laid the foundation for a more analytical and precise study of fossil osteology in this county, by that able disciple of the Cuvierian school, Dr. Buckland. This series was most handsomely presented by the Council of the Yorkshire Philosophical Society. From the carboniferous limestone of Kendal an extensive series of fossils have been presented by one of the Curators, J. G. Marshall, Esq. From the crag formation of Norfolk a valuable series of shells and ichthiolites have been presented by Mr. R. B. Wigham, of Norwich. A collection of very select and beautiful zoophytes, from the Dudley limestone, have been obtained by purchase; and from the shale of the Middleton coal-field, many interesting remains of fishes have been procured.

Down the centre of the room two tables have been provided for the mineralogical collection, which has undergone re-arrangement; this, it is hoped, will not only facilitate the study to the tyro, but afford

ready assistance to the more matured votary of the science, inasmuch as the analysis of the principal mineral substances are now placed in a tabular form, at the head of each group. In the zoological room, alterations, which though not so extensive, perhaps, of not less importance, have taken place. The large lantern light, which had been for several years a constant source of annoyance on account of its imperfect construction, has been replaced by an entirely new one, in which all the deficiencies of the former are remedied. It is, therefore, confidently expected that no further inconvenience will be felt. The north and south ends of the gallery have been fitted up with new cases, thus affording space for arranging the aquatic birds and cetacæa at one end, and of the reptiles and fishes at the other. In the latter department several accessions have been made, especially among our native fishes, and the valuable collection which the Society purchased many years since, from the Mediterranean, have all undergone a thorough revision, and been placed in more suitable jars, and named. The cases in the lower part of the zoological room have been considerably improved, so as not only to afford accommodation for double the number of specimens they held before, but also to admit a much better light. In the departments of mammalia and orni-

thology several most important additions have been made. An opportunity having occurred, by the sale of part of Mr. Corbett's Museum, a subscription was entered into by several of the members of the Society, which enabled the Curators to select many interesting and desirable specimens, not only of rarity, but valuable in a zoological point of view, as illustrating particular genera and families, an enumeration of which will be seen in the list appended to this Report. The fine pair of Snowy Owls, presented by his Worship the Mayor, William Smith, Esq.; the Golden Eagle, by William Thompson Thompson, Esq.; and the American Black Bear, from Townend Glover, Esq., of New York, are also deserving of the gratitude of the Society. In order to display the conchological collection to more advantage, a large table has been appropriated. The zoophytes have been re-arranged in accordance with the system propounded by the learned author of the History of British Zoophytes, Dr. G. Johnston.

The small room, which was formerly occupied by the geological collection, has been fitted up with suitable cases for the antiquities, works of art, dresses, &c. of uncivilized nations. The fine mummy, presented by the late John Blayds, Esq.,

which has so long been an object of general interest, has been placed under a glass shade, so as effectually to preserve it alike from dust and mutilation, and exhibit the original situation of the two lids. Your Curator of antiquities has been the more anxious in this instance to unite, as far as possible, preservation with effect, from a conviction that the Society have just cause to feel proud in possessing a mummy which has certainly not its superior in the kingdom, and it is very questionable if there are any surpassing it on the continent. In this room are deposited several highly interesting series of specimens illustrative of our manufactures. These form quite a new feature in provincial museums, but which nevertheless must prove of great interest to the visitor who has not had opportunities of observing the various processes which substances undergo in their transition from the rough material to the finished fabric.

Many parts of the classification, however, of the Museum are not completed, there not having been sufficient time since the workmen finished their labours, to carry into effect all the Curators contemplate. It is hoped, however, that those members

of the Society who can appreciate the various objects which require attention, and the limited period which could be devoted to each, will not be harsh in their criticism upon any individual imperfections which may strike them, but remember that it has only been by division of labour that the whole of the specimens have so far approached a state fit for inspection.

Before dismissing this part of our subject it is but justice to state that the Society is indebted to the great liberality of Mr. CHANTRELL, for providing plans and superintending the alterations which have taken place.

In conclusion, the Council would take the liberty of reminding the members, that the continued prosperity of the Society must entirely depend upon the interest taken in its proceedings by members individually; and to express a hope that each gentleman will feel bound to give that assistance, which all may in some way or other render; either by reading papers; communicating facts; presenting specimens worthy of preservation; or furthering the general objects of the Society. The President may be



punctual, the Curators and Secretaries assiduous, and the Council diligent, but unless the Members are also active in co-operation, the interest must flag, langour succeed to exertion, and this, one of the most useful and most creditable Institutions of the Town or Riding, be curtailed in its usefulness.

# LEEDS PHILOSOPHICAL AND LITERARY SOCIETY.

## PROPRIETARY ACCOUNT.

Balance Due to the Treasurer..... £337 14s. 0d.

## ORDINARY ACCOUNT.

### Disbursements.

|                                             | £.          | s.        | d.       |
|---------------------------------------------|-------------|-----------|----------|
| To Sub-Curator's Salary and Expenses.....   | 116         | 5         | 0        |
| - Insurance.....                            | 8           | 12        | 6        |
| - Tradesmen's Bills.....                    | 36          | 1         | 2½       |
| - Books and Stationery.....                 | 40          | 10        | 0        |
| - Printing and Advertising.....             | 24          | 12        | 0        |
| - Taxes.....                                | 25          | 18        | 4        |
| - Coals and Coke.....                       | 18          | 15        | 9        |
| - Purchase and Carriage of Specimens.....   | 23          | 7         | 2        |
| - Mr. Knight.....                           | 23          | 11        | 8        |
| - B. R. Haydon, Esq., for Six Lectures..... | 31          | 10        | 0        |
| - Professor Johnston, for Ten Lectures..... | 63          | 0         | 0        |
| - Sundry Expenses, Cleaning, &c.....        | 10          | 15        | 10½      |
| - Doorkeeper.....                           | 14          | 0         | 0        |
| - Postage of Circulars, &c. to Members..... | 3           | 18        | 1        |
| - Interest to Bankers.....                  | 7           | 2         | 0        |
|                                             | <u>£474</u> | <u>18</u> | <u>7</u> |

*Balance*

*457.19.7*  
*457.18.11*  
*457.5.6½*

### Receipts.

|                                                    | £.          | s.       | d.        |
|----------------------------------------------------|-------------|----------|-----------|
| By Balance in the Hands of the Sub-Curator.....    | 8           | 12       | 6½        |
| - Subscriptions of 120 Members.....                | 252         | 0        | 0         |
| - Subscriptions of 57 Subscribers.....             | 59          | 17       | 0         |
| - Deposits and Subscription of 12 New Members..... | 63          | 0        | 0         |
| - Subscription of 17 New Subscribers.....          | 17          | 17       | 0         |
| - Arrears of Subscription.....                     | 16          | 18       | 0         |
| - Fines.....                                       | 3           | 1        | 0         |
| - Rent of Cellars under the Hall.....              | 20          | 0        | 0         |
| - B. R. Haydon, Esq.'s Lectures.....               | 2           | 9        | 6         |
| - Professor Johnston's Lectures.....               | 2           | 8        | 0         |
| - Letting of Lecture Room.....                     | 10          | 3        | 0         |
|                                                    | <u>£456</u> | <u>5</u> | <u>6½</u> |

Balance.....

18 13 0½  
£474 18 7

# DONATIONS AND ADDITIONS

## TO THE

## SOCIETY'S MUSEUM.

*Those marked † are Members of this Society; thus \* Honorary Members.*

### GEOLOGY AND MINERALOGY.

- |                                                                                                          |   |                                                     |
|----------------------------------------------------------------------------------------------------------|---|-----------------------------------------------------|
| Specimen of Coal, &c. from Southern Africa .....                                                         | } | Rev. J. Archbell, Graham's Town.                    |
| A Series of Fossil Plants, from Gristhorp Bay, Scarbro' .....                                            | } | Purchased by the Society.                           |
| Fine Specimen of the Molar Tooth of Mastodon Angustidens, from America .....                             | } | Ditto.                                              |
| Three Fossil Fish, from Monte Bolca .....                                                                | } | †Mr. J. I. Ikin.                                    |
| Specimens of Ulodendron Magus Calamites ramosus; Coal and Iron Stone, from the Low Moor Iron Works ..... | } | †Mr. West.                                          |
| Fine Specimen of Lepidodendron, aculeatum, from Meanwood .....                                           | } | Messrs. Walsh and Dunbar.                           |
| Sixty Specimens of Fossil Remains of the Hyæna, Wolf, Water Rat, Ox, &c. from Kirkdale Cave .....        | } | The Council of the Yorkshire Philosophical Society. |
| Vegetable Remains in Sandstone, from Manston Colliery .....                                              | } | Mr. G. Kitson.                                      |

- Specimens of Calamites, Halonia,  
Stigmaria, and Lepidodendron, in  
Sandstone, from Cat Hill, near  
Barnsley; Fragments of Wood  
and Hazel Nuts, from a lacustrine  
deposit at Darfield; two very fine  
Masses of Caryophyllia, from the  
Coral Rag of Steeple Ashton; Clay  
Slate from Devonshire, Mica-  
ceous Schist, from Ben Lomond;  
three Specimens of Neuropteris,  
from Wakefield ..... } +Mr. J. R. Hubbard.
- A valuable Series of fifty-five Species  
of Shells and Ichthyolites, from  
the Norfolk Crag, with drawings  
illustrative of the Crag strata, at  
Whitlingham, Thorp, and Post-  
wick, near Norwich ..... } Mr. R. B. Wigham, Norwich.
- Several Specimens from the Mag-  
nesian Limestone of Askern, and  
Crag of Suffolk ..... } Dr. Lankester, Campsall.
- A valuable Collection of Zoophytes,  
from the Dudley Limestone .... } Purchased by the Society.
- Several Organic Remains, from the  
Caradoc Sandstone and Upper  
Ludlow Rock ..... } +J. G. Marshall, Esq., F.G.S.
- Cardita Producta, from the Kimme-  
ridge Clay of Northamptonshire.. } Mr. G. Hubbard, Bury, Suffolk.
- Fine Branch of Stigmaria, from  
Meanwood ..... } Messrs. Walsh and Dunbar.
- Endogenites erosa, from Hastings .. } Mr. G. Robinson, Hull.
- An extensive Collection of Organic  
Remains, from the Mountain  
Limestone of Kendal ..... } +J. G. Marshall, Esq., F.G.S.

Two Specimens of *Lepidostrobos*, }  
 from Greta Bridge..... } Mr. C. J. Armistead.

Several Minerals, from the Isle of }  
 Man; including Specular Galena, }  
 Iron Pyrites, Crystals of Quartz, }  
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 Spar, Phosphate and Carbonate }  
 of Lead, &c. .... }

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 Hæmatite, and Schorl..... } +Mr. J. R. Hubbard.

Seven Organic Remains, from the }  
 Chalk of Rugen, Germany ..... } +Mr. H. J. Marcus.

## ZOOLOGY.

Skin of the Black Bear of North } Townend Glover, Esq., New  
 America (*Ursus Niger Americanus*) } York.

Skull of the Newfoundland Dog, }  
 (*Canis extrarius*) ..... } +Mr. Edwin Eddison.

Specimen of the Common Martin, }  
 (*Mustela Foina*) ..... } Purchased by the Society.

Pair of the Reddish Grey Bat, }  
 (*Vespertilio Nattereri*) ..... } +Mr. E. J. Teale.

Specimen of the Wombat, (*Phas-* }  
*colomys Wombat*) ..... } +Thomas Blayds, Esq.

Duckbilled Platypus, (*Ornitho-* }  
*rynychus Fuscus*) ..... } +Mr. E. J. Teale.

Short-tailed Manis, (*Manis Penta-* }  
*dactyla*) ..... } +Messrs. March and Maclea.

Radiated Mole, (*Condylura Cristata*) } +John Blayds, Esq.

- Maritime Rat, Mole of the Cape, }  
 (Bathyergus Maritimus) ..... } +William Hey, Esq.
- Small Rat Mole of the Cape, }  
 (Bathyergus Capensis) ..... } +William Williams Brown, Esq.
- Pair of the Water Campagnol  
 (Arvicola Amphibia); Pair of the  
 Field Campagnol, (Arvicola Agres-  
 tis); Pair of the Water Shrew,  
 (Sorex fodiens) ..... } Purchased by the Society.
- Grey Variety of the common Hare, }  
 (Lepus timidus) ..... } Mr. James Brown.
- Porpoise (Delphinus Phocæna); }  
 Skeleton of ditto ..... } Purchased by the Society.
- Great African Kingfisher (Alcedo  
 Maxima); Great-billed Tody, }  
 (Todus Nasutus) ..... } +Mr. Bateson.
- Golden Oriole, (Oriolus Galbula) .. } +Mr. Hare.
- Long-tailed Shrike, (Lanius Cau-  
 datus) ..... } +Mr. E. S. Swaine.
- Senegal Shrike, (Lanius Senegalensis) } +Mr. Thomas Hall.
- St. Domingo Falcon; Indian Jacana, }  
 (Parra Indica) ..... } +Mr. Thomas Pease.
- Fairy Oriole (Irena Puella) ..... } +Mr. Edwin Eddison.
- Specimen of the Agami Heron, }  
 (Ardea Agami) ..... } +Rev. Dr. Hook.
- Black Bird of Paradise (Paradisæa  
 nigricans) ..... } +J. G. Marshall, Esq.
- Cape Honeysucker (Nectarina Ca-  
 pensis) ..... } +T. W. Tottie, Esq.
- Wattled Honeysucker, (Anthochaera  
 Carunculata) ..... } +John Gott, Esq.
- Purple Water Hen (Porphyrio  
 Hyacinthinus) ..... } +Mr. Robert Arthington.

- Asiatic Swiftfoot, (*Cursorius Asiaticus*) ..... } †Mr. T. P. Teale.
- Great Brown Dacelo, (*Dacelo Gigantea*), from New South Wales.. } †Dr. Hunter.
- Martinico Gallinule, (*Gallinula Martinica*); Groove-billed Barbut, (*Pogonias Sulcirostris*) ..... } †Mr. W. S. Ward.
- Blue-faced Honeysucker, (*Meliphaga Cyanops*) ..... } †Mr. William Hey.
- White-necked Stork; Black-tailed Godwit, (*Limosa Melanura*) .... } †Mr. J. W. Hugall.
- Three American Birds, viz. Buffel-headed Duck, (*Clangula Albeola*); Canvas-backed Duck, (*Anas Valisneriana*); Black-backed Gull, (*Larus Marinus*)..... } Townsend Glover, Esq., New York.
- Dotteril, (*Charadrius Morinellus*); Oyster-catcher, (*Hæmatopus Ostrealegus*) ..... } Purchased by the Society.
- Skeletons of the Red-backed Shrike, Spotted Flycatcher, Black-bird, Chaffinch, Nightingale, Blackcap Warbler, Wheatear, Whinchat, Blue Titmouse, Yellow Bunting, Green Grosbeak, Siskin, Meadow Pipit, Starling, Yellow Wagtail, Willow Wren, Common Gull, Razorbill, Puffin, Water Shrew, Common Shrew, Dormouse, Field Campagnol..... } Purchased by the Society.
- Green Sandpiper, (*Totanus ochropus*); Goatsucker, (*Caprimulgus Europæus*); Cuckoo, (*Cuculus canorus*); Snow Bunting, (*Emberiza nivalis*) ..... } †Mr. E. J. Teale.

- Egg of the Gray Parrot, (*Psittacus Erythacus*) laid after the Bird had been in confinement 16 years .... } A Lady.
- Ring Ouzel, (*Turdus Torquatus*); }  
Water Ouzel, (*Cinclus aquaticus*) } +Mr. Abraham Clapham.
- Pair of the Swift, (*Cypselus Apus*).. } Mr. Pemberton.
- Skeleton of the common Tern, (*Sterna hirundo*) ..... } Mr. Macaulay.
- Green Sandpiper, (*Totanus ochropus*) } Mr. Barstow, Temple Thorp.
- Fine specimen of the Golden Eagle, }  
(*Aquila Chrysætos*) ..... } +Wm. Thompson Thompson, Esq.
- Fine pair of the Snowy Owl, (*Surnia Nyctea*) ..... } +Wm. Smith, Esq.
- Specimens of the following British Birds:—Spotted Flycatcher (male and female), Redstart (male and female), Sedge Warbler, White Throat, Lesser White Throat, Hedge Warbler, Black-cap Warbler, Greater Pettychaps, Yellow Wagtail, Meadow Pipit, Wheat-eat, Whinchat, Marsh Titmouse, Common Bunting, Reed Bunting, Yellow Bunting, Chaffinch, Mountain Finch, House Sparrow, Tree Sparrow, Lesser Redpole ..... } Purchased by the Society.
- Pair of the Flying Gurnard, (*Dactylophorus Volitans*); Jaws of the Swordfish, (*Xiphias gladius*); Lizard Fish, (*Saurus saurus*); Sea Hedgehog, (*Diodon atinga*); and Congo Snake, from St. Vincent's.. } Mr. B. Marsden.
- Specimen of the Wild Swan, (*Cygnus ferus*) ..... } +Mr. Abraham Clapham.



- Specimens of the Trifurcated Hake,  
 (*Raniceps trifurcatus*) ; Bleak,  
 (*Cyprinus Alburnus*) ; Salmon,  
 (*Salmo salar*) ; Parr, (*Salmo*  
*salmulus*) ..... } +Mr. T. P. Teale.
- Frog Fish or Angler, (*Lophius Pisco-*  
*torius*) ..... } Mr. R. Phillips.
- Barbel, (*Barbus vulgaris*) ; Coalfish,  
 (*Merlangus carbonarius*) ; Blue  
 Shark, (*Squalus glaucus*) ; Two  
 Heads of the Broadnosed Sturgeon,  
 (*Sturio latirostris*) ..... } Purchased by the Society.
- Scad or Horse Mackerel, (*Caranx*  
*Trachurus*) ..... } Mr. Wilson.
- Prepared Specimens of the Perch and  
 Rud ..... } Dr. Lankester, Campsall.
- Very fine Snout of the Sawfish,  
 (*Pristis Antiquorum*) ..... } Miss Mann, Seacroft.
- Entire Specimen of the Sawfish,  
 (*Pristis Antiquorum*) ; Slender-  
 nosed Gavial, (*Gavialia Tenuiros-*  
*tris*) ; Halibut, (*Hippoglossus vulga-*  
*ris*) ; Turbot, (*Rhombus Maximus*) ..... } Purchased by the Society.
- Specimens of the Crucian Carp,  
 (*Cyprinus Gibelio*) ; and Golden  
 Carp, (*Cyprinus Auratus*) ..... } +Mr. Wm. Brigg.
- American Box Tortoise, (*Cistuda*  
*Clausa*) ..... } Mrs. Skilbeck.
- Specimens of Triton ; Eggs of the  
 Common Tortoise, (*Testudo Græca*) ..... } Purchased by the Society.
- Pair of the Ruffe, (*Acerina Vulgaris*) } \*Mr. Denny.
- Loligo Sagittata ; and the Exuvia of  
 the Lobster ..... } John Dunn, Esq., Scarborough.
- Fine Specimen of Pinna Ingens... } +Mr. Jonathan Dickinson.

## MISCELLANEOUS.

- Ivory Pin and Needle, from a Roman Grave, near York ..... } Mr. James Motley.
- Three Operculi from Cuba, called Eye Stones, used by the Natives for removing extraneous matter from the Eyes ..... } Mrs. A. Lupton.
- A Series of Specimens illustrating the Hemp and Flax Manufacture, from Rope down to Shop Thread.... } Messrs Grimshaw and Robinson.
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 Leeds Railway ..... } +Mr. Edward Joy.

## LIBRARY.

- Six Drawings illustrating the Genera  
 of Fossil Fishes from the Car-  
 boniferous System ..... } +Mr. J. W. Hugall.
- Report of the Birmingham Philo-  
 sophical Institution..... } The Birmingham Philosophical  
 Institution.
- Reports of the Meeting of the West  
 Riding Geological and Polytechnic  
 Society at Leeds ..... } The West Riding Geological and  
 Polytechnic Society.
- Tenth Report of the Scarbro' Philo-  
 sophical and Literary Society .... } The Scarbro' Philosophical Society.
- Transactions of the Berwickshire  
 Natural History Club..... } Dr. G. Johnston, Berwick.
- On the Relation between the Holy  
 Scriptures, and some parts of Geo-  
 logical Science, 1 vol. 8vo..... } Dr. Pye Smith, the Author.
- Report of the Hull Literary and  
 Philosophical Society ..... } The Hull Literary & Philosophical  
 Society.

- A Treatise on the Medicinal Leech, } James Johnson, Esq., Clifton.  
1 Vol. 8vo..... }
- Cuvier's Fossil Osteology by Griffith, } Purchased by the Society.  
1 Vol. 8vo..... }
- Pamphlet "On Academies of Art..." } B. R. Haydon, Esq., the Author.
- Engraving of a new species of Coleop- } Mr. Mason.  
terous Insect (Aserrador Hewitsoni) }
- Transactions of the Royal Society of } The Royal Society of Edinburgh.  
Edinburgh, Vol. XIV. p. I.... }
- Portrait of Dr. Wm. Smith, the father } Dr. Wm. Smith.  
of English Geologists ..... }
- Historique et description des procedes } +Mr. J. I. Ikin.  
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- A Lecture on the Economy of a Coal }  
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 Miss P. C. Oates.  
 Miss Ogle.  
 James Ogle.  
 Miss Mary Ann Ogle.  
 Miss Parker.  
 Robert Parkinson.  
 John Pearson.  
 G. B. Pearson.  
 Rev. G. A. Poole, A.M.  
 John Poynter.  
 William Prichard, jun.  
 Adolphus Kahn.  
 David Rider.  
 Miss Roberts.  
 N. P. Simes.  
 John Simpson, jun.  
 R. W. Simpson.  
 William Simpson.  
 G. P. Smith, M.D.  
 William T. Smith.  
 Miss Smyth.  
 Henry Snowden.  
 Edmund Southerne.  
 James Stables.  
 W. F. Stow.  
 George Taylor.  
 Rev. W. H. Teale.  
 Joseph Teale.  
 John Turpin.  
 John Wilkinson.  
 T. J. Wilkinson.  
 Henry Williamson.  
 John Wilson.  
 Philip Wolff.



## HONORARY MEMBERS.

Louis Agassiz, M.D., Professor of Comparative Anatomy, &c., *Neufchatel*.

M. Allen, M.D., *Epping Forest*.

George Bennett, Esq., *London*.

George Birkbeck, M.D. F.R.S., *London*.

Sir David Brewster, D.C.L. F.R.S. &c., *Edinburgh*.

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Thomas Campbell, *London*.

William Carey, *London*.

John Dalton, D.C.L. F.R.S., Corresponding Member of the French Institute, *Manchester*.

Henry Denny, Hon. Member of the Yorkshire Philosophical Society, and of the Norfolk and Norwich Museum, *Leeds*.

J. Drake, M.D., *Cincinnati*.

William Hey Dykes, F.G.S., Honorary Member of the Yorkshire Philosophical Society, *Hull*.

John Field, *Low-Moor*.

The Right Hon. Earl Fitzwilliam, F.R.S., &c., *Wentworth House*.

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B. R. Haydon, Historical Painter, &c., *London*.

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J. F. W. Johnston, A.M., F.R.S., &c., Reader in Chemistry and Mineralogy in the University of Durham, *Durham*.

Robert Leyland, *Halifax*.

William M. Maude, *Knostrop*.

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James Montgomery, Hon. Member of the Yorkshire Philosophical Society, *Sheffield*.

John Phillips, F.R.S. and F.G.S., Professor of Geology to King's College, London, Hon. Member of the Yorkshire, Hull, Sheffield, and Halifax Philosophical Societies, *York*.

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Thomas Robinson, *Leeds*.

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James De Carle Sowerby, F.L.S., &c., *London*.

John Spear, *London*.

Thomas Stewart Trail, M.D., F.R.S., Professor of Medical Jurisprudence in the University of Edinburgh.

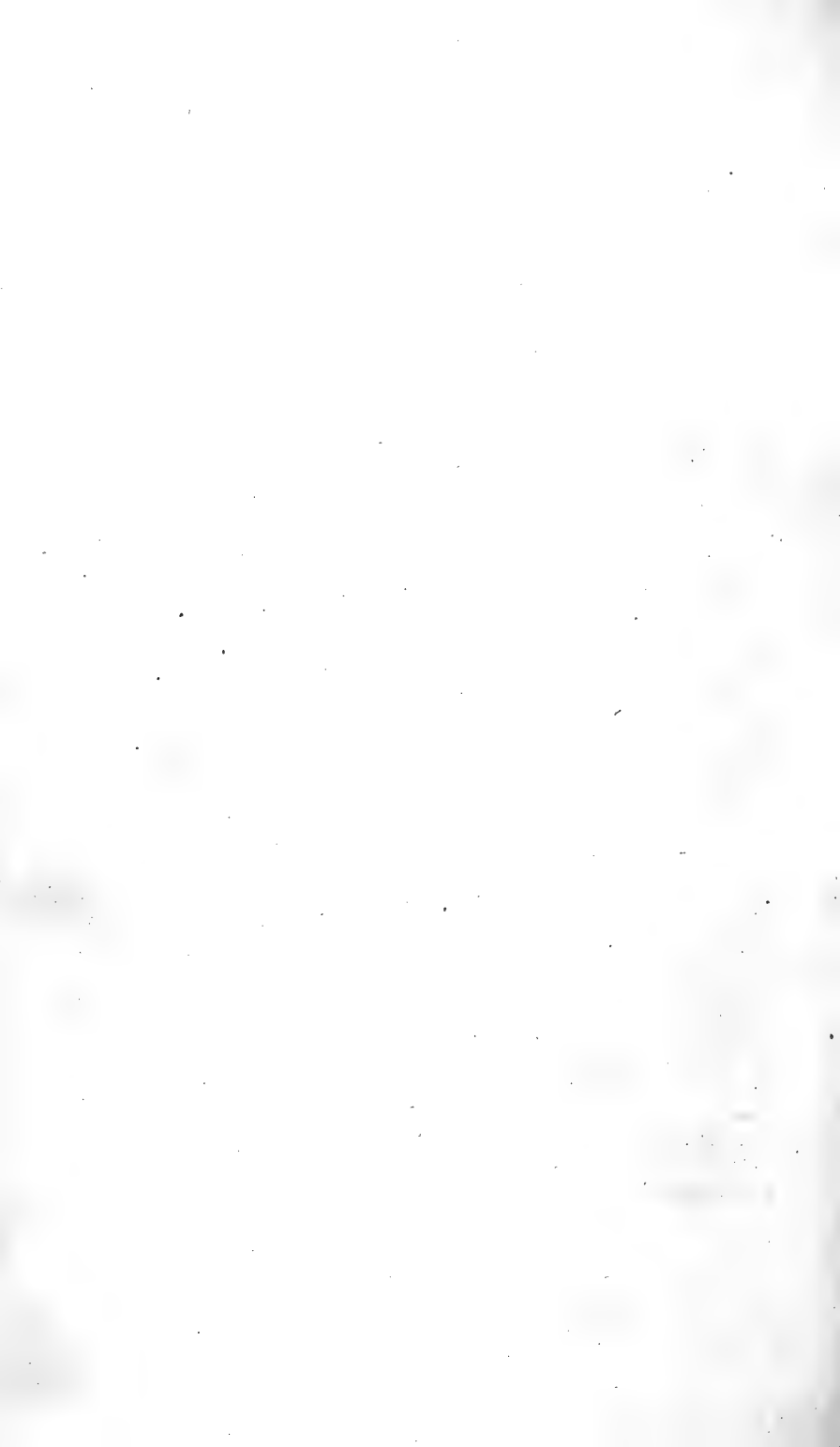
Rev. W. V. Vernon Harcourt, F.R.S. and G.S., Vice-President of the Yorkshire Philosophical Society, *Bolton-Percy*.

Charles Waterton, Hon. Member of the Yorkshire Philosophical Society, and Bristol Institution, *Walton Hall*.

John K. Walker, M.D., *Huddersfield*.

The Ven. Francis Wrangham, M.A., F.R.S. Archdeacon of Cleveland, Prebendary of York and Chester, F.C.P.S., Honorary Member of the Yorkshire and Hull Philosophical Societies, *Hunmanby*.

Rev. G. Young, D.D., A.M., M.W.S., Hon. Member of the Newcastle, Yorkshire, and Hull Philosophical Societies, *Whiby*.



TWENTY-FIRST REPORT  
OF THE  
COUNCIL  
OF THE  
LEEDS PHILOSOPHICAL  
AND  
LITERARY SOCIETY,  
AT THE  
CLOSE OF THE SESSION,  
1840-41.

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LEEDS:  
PRINTED BY JOHN HEATON, 7, BRIGGATE.

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# 1875

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# REPORT OF THE COUNCIL

AT THE

CLOSE OF THE TWENTY-FIRST SESSION.

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It but seldom happens, in a Society established solely for the purpose of promoting and encouraging the peaceful pursuits of Science and Literature, that much occurs in the course of a single year which calls for lengthened remark. During the past Session the Society has held the even tenor of its way. If on the one hand no very rapid stride has been made, on the other, no ground has been lost; for though, perhaps, the accession of new Members has not been equal to that of the two former years, variation in this respect must always be looked for, and is dependant upon many casualties not immediately connected with the Society.

During the past year, three new Ordinary Members and seven Subscribers have been elected; also to the list of Honorary Members two names have been added. To one gentleman, who is well known by his writings, SAMUEL BAILEY, Esq. of Sheffield, the Society has, on more than one occasion, been indebted for interesting

literary contributions; and to the other gentleman, THE CHEVALIER MICHELOTTI, of Turin, the Society owes its best thanks for the unasked present of an extensive and valuable collection of fossils characteristic of the Tertiary formation, from the neighbourhood of Turin.

The Council has much pleasure in being enabled to give so favourable an account of the funds of the Society. Up to the year before last it will be in the recollection of many, that the debt upon the Ordinary Account was much on the increase, and although, it is true, by the great exertions then made, the balance was nearly paid off; yet the Treasurer's statement this year offers for the first time, at least for many years, the novel feature of a small surplus in the receipts over the expenditure. It is highly desirable that attention should scrupulously be given to this point, in order that in future the expenses may, as nearly as possible, be balanced by the income, so that there may not again be the incubus of an accumulating debt upon the ordinary funds.

The debt upon the Proprietary Account, arising in the first instance, from two shares in the Building being unappropriated, and which originally amounted to £200, has now, by lying at compound interest, mounted up to nearly double that sum, and unless some scheme shall speedily be devised for paying it off, there appears to be no other prospect, but that in the course of a

few more years it will so accumulate as to become more and more difficult to remove. The retiring Council would impress upon its successor, the propriety of endeavouring, if possible, to devise some method by which it may be paid off.

The alterations in the Building and Museum, commenced two years since, have been now for some time completed: annexed is a statement of the expenditure, and also a list of the subscribers, by whose liberality the funds were contributed. It is only an act of justice, but one which your Council has much pleasure in discharging, to state how deeply the Society is indebted to the Curator in Geology, J. G. MARSHALL, Esq. for allowing the Society the advantage of the constant superintendence, during the progress of the alterations in the building, of an able and intelligent person in his own service; and also for taking charge of all payments connected with the work, from which two great advantages have resulted—economy in the outlay, and efficiency in the constructions.

The printed copies of the Laws of the Society being disposed of, it has been thought desirable, previous to the printing another edition, that the whole code should be submitted to revision; accordingly, several alterations and modifications in the Laws will be proposed this morning; the great majority of which, however, are merely verbal, or such as are rendered

necessary to make those Laws which have remained unchanged, correspond in expression and spirit with such alterations as have been, from time to time, introduced into the Society's regulations.

Since the close of the last Session, two Courses of Lectures have been delivered: the one consisting of four Lectures "On Metereology," by MR. ESPEY of Philadelphia; the other being a Course of seven Lectures "On the Structure and Functions of Insects," by MR. H. GOADBY, F.L.S. Correspondence has been entered into with several other gentlemen in the hope of procuring their services for a third course; those, however, whom the Council would have wished to have introduced into the Society's Hall, were pre-engaged, and it was thought desirable not to compromise the Society by falling back upon any second-rate lecturer. It is a source of satisfaction to announce, that an engagement has been entered into with PROFESSOR TAYLOR for next Session, during which it is expected he will deliver a Course of six Lectures "On the Vocal Harmony of the different Italian Schools in the Sixteenth Century," to which doubtless many Members, recollecting the popularity of MR. TAYLOR's previous Lectures, will look forwards with much pleasure.

The attendance at the Ordinary Meetings has, on the whole, not been so good as that of last Session, though the Papers read at these Meetings have pre-



sented at least as varied a character as on any former occasion, as the following enumeration will shew :—

#### GENERAL MEETINGS.

1. "On the British Universities"—by Dr. Hunter, *President*—(Read Oct. 16th, 1840.)
2. "On Keat's Poetry—its characteristics"—by the Rev. John Cameron of Wakefield—(Read Nov. 6th, 1840.)
3. "On the Philosophy of Bishop Berkeley"—by the Rev. George Ayliffe Poole, M.A.—(Read Nov. 20th, 1840.)
4. "On Venice"—by Mr. J. I. Ikin—(Read Dec. 4th, 1840.)
5. "On the Capabilities of the Globe which we inhabit"—by the Rev. John Ely—(Read Jan. 1st, 1841.)
6. "On the Phases of Comets"—by Mr. Christopher Kemplay—(Read Jan. 15th, 1841.)
7. "On the effect of Social Influences on the Poetry of England"—by Mr. Hamilton Richardson—(Read Feb. 5th, 1841.)
8. "On Lamertine and his Works"—by Dr. Pyemont Smith—(Read Feb. 19th, 1841.)
9. "Cursory Observations on some of the Changes which have taken place in the English Language"—by Samuel Bailey, Esq. of Sheffield—(Read March 5th, 1841.)
10. "On Ethics in Olden Time"—by Mr. Shaen—(Read March 19th, 1841.)
11. "On Animal Mechanics"—by Mr. Braithwaite—(Read April 2nd, 1841.)
12. "On the Characteristics of Spanish Literature"—by Mr. Boyes—(Read April 16th, 1841.)

The progress of the Museum is steady and satisfactory. It is pleasing to observe the increasing taste amongst all classes of the community for enjoying the advantages which the easy accession to such Collections

present. The number of the working population which seeks admission is much on the increase: not fewer than seven hundred persons sought and obtained gratuitous admission on last Easter-Monday and Tuesday; their conduct on this, as it has been, with scarcely an exception, on all other occasions, was orderly and decorous. Being thus brought into familiar and immediate contact with well arranged Collections of the works of Nature and Art, whether of the present day or of ages which are past, cannot fail to have a most beneficial and humanizing effect upon the mind of even the least informed member of the community, and forms not an unimportant feature in the means for civilizing and refining the great body of the people.

The additions to the Museum during the Session, whether by donation or purchase, though perhaps in the aggregate not so numerous as those of last Session, or possessed of such external attractions as to strike the ordinary observer; are, nevertheless, both extensive, and of a highly important character, and such as the scientific investigator of Nature will readily recognize and duly appreciate. Among those which call for especial notice are the following :—During the autumn a letter was received from THE CHEVALIER MICHELOTTI of Turin, offering to present to the Society a series of Tertiary Fossils illustrative of the *Miocene Period*, from the valley of the Bormida and the Su-

perga near Turin. This liberal proposal, it is almost needless to say, was gladly accepted, and upwards of two hundred specimens, in a high state of preservation, were received. These have proved a great acquisition, not so much as specimens from a foreign locality, but as forming a group in the Tertiary Series (the Marine formation of the Miocene Period), of which the Museum was quite destitute. To the superficial or alluvial deposits, has been added a nearly perfect Horn of a species of Deer (probably the *Cervus Elephas*), found in excavating for a building at St. Peter's Hill. This, when taken in connexion with remains previously received from the same locality, is of high interest to the Geologist: serving as it does to demonstrate, if not a change in the course of the river Aire, at least an entire submersion of this part of the country at some not very remote period; for from the vegetable reliquæ, such as branches, hazel nuts, &c. which have been exhumed before, it is highly probable the animal was submerged in its native forest. In all probability, as this line of country is gradually broken up for the purpose of building ground, more remains will be discovered; it is, therefore, most desirable that Members of the Society should exert themselves to secure for the Museum such as may occur. In the Cretaceous System many additions will be observed, as the Sponges from the Yorkshire Coast, and the Ichthyological Remains and Shells from the Chalk of Cambridgeshire.

In the Oolitic Series also, there has been an increase of two hundred specimens from the Kelloway Rock, by the donation of one of your Honorary Members, (ROBT. HALL, Esq.) Lastly, the upper Carboniferous group has been enriched by the gift of the Curator in Geology of two hundred Fossil Plants, from those valuable deposits of a former Flora—Grithorp Bay and Stainton Dale, on the Yorkshire Coast. It is to be regretted, however, that more illustrations of the Geology of our own neighbourhood have not been received: since one of the principal objects of Provincial Institutions should be the collection of specimens which occur in their own localities, and thus exhibit to the visiter the Geology peculiar to the district. This observation, however, though peculiarly applicable, from the richness of our Coal-field and Sandstone formation in examples, of the primeval flora of this portion of the Island, is not in the least intended to undervalue the acquisition of specimens from other counties, or more distant parts of the globe. On the contrary, the Society will be most happy to receive additions from any locality; and especially those belonging to formations of which the Museum is deficient: as the London Clay, Wealden Clay, Portland Oolite, Bath Oolite, Forest Marble, New Red Sandstone.

In the Zoological Department, several highly interesting additions will be recognized. The Osteological

illustrations, form no mean item in this year's acquisitions; many of these, it will be observed, have been purchased by the Society for a trifling amount. Though fully aware of the necessity for observing the strictest economy, as regards purchases, from the limited state of the funds; yet it is also necessary to bear in mind the fact, that in order to render the Museum of this Society instructive as well as interesting, it is imperative to secure such Specimens of value as may be offered at a moderate price, and which if allowed to pass may very possibly not occur again for a long time. The study of Comparative Anatomy is now becoming very general, and its importance fully acknowledged as the ground-work for a thorough acquaintance with the various grades of animal existence, or at least the organization of the different groups; by which we are enabled not only to understand their affinities and analogies, but also to discover the line of specific demarkation, as traced by the hand of nature, and so ably exemplified by the labours of *Cuvier*, *Owen*, *Buckland*, and others. These labours have given to the investigations of the Zoologist an almost mathematical precision, and aided to an extent which no other source could, our knowledge not only of the relative connexion and situation of recent forms, but still more those of ages long past away. The only evidence of the existence of these creatures is to be seen in the solid framework of their bodies, or oc-

casionaly in the more perishable portions of their internal structure, which the revolutions of centuries have been unable to obliterate, and which the Geologist brings again to the light of day; but it is the Comparative Anatomist alone who is able to effect their restoration and classification.

With these views, therefore, though fully aware that it will be a work of considerable time to form an extensive collection of this nature, the Council would urge the Members of the Society to co-operate with them, by forwarding specimens of Quadrupeds, Birds, Reptiles, or Fishes (more especially those of our own Island, which ought first to claim our attention), for in all cases where Specimens may not be required for preservation entire, or may not be in a fitting condition, they may still form valuable addenda as skeletons. It will be seen by the list, that forty Skeletons have been added to the Museum besides several Crania, by which means some of the Classes have become far more instructive than hitherto. For instance, in the Class *Reptilia*, we have now complete Skeletons of each Order comprised therein. The importance of which, whether for the illustration of Public Lectures, or the elucidation of Private Study, requires no comment.

The naming of the Specimens, together with the localities and donor's names, is still in progress. The Mammalia and Fish are completed, the Birds far advanced, and the Geological collection is partially com-

pleted, but from the number of individual Specimens which require minute examination, much longer time will be required.

The Library has received the Reports of several Provincial Institutions, and a few Donations of Books. The Council feel pleasure in acknowledging the receipt of the former, as such contributions shew most satisfactorily the friendly feeling which exists between Institutions widely separated from each other in point of locality, yet co-operating for the accomplishment of the grand object of their foundation—the elucidation of Scientific discovery—the spread of Knowledge—and the Gratification and Improvement of all classes of the community. In the promotion of which, it is earnestly hoped that the Inhabitants of the populous and wealthy Borough of Leeds, will not allow this Society to be second to any in the kingdom.

# LEEDS PHILOSOPHICAL AND LITERARY SOCIETY.

## PROPRIETARY ACCOUNT.

Balance due to Treasurer..... £354 16s.

## ORDINARY ACCOUNT.

### Disbursements.

|                                         | £.          | s.       | d.       |
|-----------------------------------------|-------------|----------|----------|
| To Balance due to Treasurer .....       | 5           | 17       | 8½       |
| Sub-Curator's Salary and Expenses ..... | 120         | 0        | 0        |
| Insurance .....                         | 8           | 8        | 4        |
| Tradesmen's Bills .....                 | 57          | 5        | 7        |
| Books and Stationery .....              | 17          | 13       | 4        |
| Printing and Advertising.....           | 23          | 18       | 6        |
| Taxes .....                             | 32          | 1        | 7½       |
| Coal Gas .....                          | 16          | 15       | 3        |
| Coals and Coke .....                    | 16          | 14       | 6½       |
| Purchase and Carriage of Specimens..... | 17          | 6        | 6        |
| Sundry Expenses, Cleaning, &c. ....     | 11          | 14       | 11½      |
| Postage of Circulars to Members .....   | 3           | 4        | 5        |
| Janitor.....                            | 26          | 0        | 0        |
| Mr. Espey, for Four Lectures.....       | 15          | 0        | 0        |
| Mr. Goadby, for Seven Lectures .....    | 36          | 15       | 0        |
| Interest to Banker .....                | 5           | 10       | 0        |
|                                         | <u>£414</u> | <u>5</u> | <u>9</u> |

### Receipts.

|                                                  | £.  | s. | d. |
|--------------------------------------------------|-----|----|----|
| By Balance in Hands of Sub-Curator .....         | 2   | 0  | 0  |
| Subscriptions of 128 Members .....               | 268 | 16 | 0  |
| Subscriptions of 46 Subscribers .....            | 48  | 6  | 0  |
| Deposits of Three New Members.....               | 15  | 15 | 0  |
| Subscriptions of Six New Subscribers.....        | 6   | 6  | 0  |
| Arrears of Subscriptions .....                   | 37  | 1  | 0  |
| Fines .....                                      | 3   | 4  | 0  |
| Rent of Cellars under the Hall.....              | 20  | 0  | 0  |
| Mr. Goadby's Lectures .....                      | 0   | 7  | 6  |
| Forty-Seven Single Admissions to the Museum..... | 1   | 3  | 6  |
| Transfer from Museum Fund .....                  | 8   | 0  | 0  |

\* Balance due to Treasurer .....

410 19 0

3 6 9

£414 5 9

\* The Report states, that a small Balance is in the hands of the Treasurer, instead of, as it here appears, being due to him. This arises from a mistake having occurred in his Accounts, which was not detected until after the Report had been read.



# DONATIONS

TO THE

## MUSEUM FUND OF THE PHILOSOPHICAL SOCIETY.

|                              | £.   | s. | d. |                                    | £.   | s. | d. |
|------------------------------|------|----|----|------------------------------------|------|----|----|
| J. R. Atkinson.....          | 50   | 0  | 0  | <i>Brought forward</i> .....       | 775  | 0  | 0  |
| Christopher Beckett .....    | 50   | 0  | 0  | E. & G. Tatham .....               | 10   | 0  | 0  |
| William Beckett .....        | 50   | 0  | 0  | Wm. Thompson Thompson..            | 10   | 0  | 0  |
| Thomas Blayds .....          | 50   | 0  | 0  | T. W. Tottie .....                 | 10   | 0  | 0  |
| John Gott .....              | 50   | 0  | 0  | John Wilkinson, <i>FlaxSpinner</i> | 10   | 0  | 0  |
| William Gott .....           | 50   | 0  | 0  | P. Willans .....                   | 10   | 0  | 0  |
| John Marshall .....          | 50   | 0  | 0  | John Atkinson, <i>East-Parade</i>  | 5    | 0  | 0  |
| J. G. Marshall.....          | 50   | 0  | 0  | Robert Barr .....                  | 5    | 0  | 0  |
| H. C. Marshall.....          | 30   | 0  | 0  | Joseph Bateson .....               | 5    | 0  | 0  |
| John Blayds .....            | 25   | 0  | 0  | Henry Bentley, <i>Oulton</i> ..... | 5    | 0  | 0  |
| Peter Fairbairn .....        | 25   | 0  | 0  | George William Bischoff ...        | 5    | 0  | 0  |
| George Goodman .....         | 25   | 0  | 0  | Thomas Bischoff, jun. ....         | 5    | 0  | 0  |
| William Hey .....            | 25   | 0  | 0  | John Cudworth .....                | 5    | 0  | 0  |
| James Brown .....            | 20   | 0  | 0  | Jonathan Dickinson .....           | 5    | 0  | 0  |
| Wm. Williams Brown .....     | 20   | 0  | 0  | John Forster .....                 | 5    | 0  | 0  |
| Arthur Marshall .....        | 20   | 0  | 0  | John Goodman.....                  | 5    | 0  | 0  |
| T. P. Teale .....            | 15   | 0  | 0  | Samuel Hare .....                  | 5    | 0  | 0  |
| Robert Arthington .....      | 10   | 0  | 0  | John Heaton .....                  | 5    | 0  | 0  |
| Edward Baines & Sons .....   | 10   | 0  | 0  | James Hubbard .....                | 5    | 0  | 0  |
| Charles Barr.. .....         | 10   | 0  | 0  | John R. Hubbard .....              | 5    | 0  | 0  |
| W. H. Bathurst .....         | 10   | 0  | 0  | Dr. Hunter .....                   | 5    | 0  | 0  |
| Richard Bramley .....        | 10   | 0  | 0  | John Lapage.....                   | 5    | 0  | 0  |
| Robert Derham .....          | 10   | 0  | 0  | Arthur Lupton .....                | 5    | 0  | 0  |
| Richard Driver .....         | 10   | 0  | 0  | H. J. Marcus .....                 | 5    | 0  | 0  |
| Edwin Eddison .....          | 10   | 0  | 0  | George Morley.....                 | 5    | 0  | 0  |
| William Gatliff .....        | 10   | 0  | 0  | Mrs. Pollard.....                  | 5    | 0  | 0  |
| Rev. R. W. Hamilton.....     | 10   | 0  | 0  | William Price .....                | 5    | 0  | 0  |
| James Hargreaves .....       | 10   | 0  | 0  | Mr. Ripley .....                   | 5    | 0  | 0  |
| William Hey, jun. ....       | 10   | 0  | 0  | George Shaw .....                  | 5    | 0  | 0  |
| James Holdforth .....        | 10   | 0  | 0  | J. Hope Shaw ..                    | 5    | 0  | 0  |
| Richard Jackson .....        | 10   | 0  | 0  | N. P. Simes .....                  | 5    | 0  | 0  |
| Charles Kirkby .....         | 10   | 0  | 0  | Hamer Stansfeld .....              | 5    | 0  | 0  |
| C. G. Maclea .....           | 10   | 0  | 0  | W. F. Stowe.....                   | 5    | 0  | 0  |
| J. O. March .....            | 10   | 0  | 0  | John Waddingham.....               | 5    | 0  | 0  |
| <i>Carried forward</i> ..... | £775 | 0  | 0  | <i>Carried forward</i> .....       | £965 | 0  | 0  |

|                              | £.    | s. | d. |                              | £.    | s. | d. |
|------------------------------|-------|----|----|------------------------------|-------|----|----|
| <i>Brought forward</i> ..... | 965   | 0  | 0  | <i>Carried forward</i> ..... | 1003  | 14 | 0  |
| W. S. Ward .....             | 5     | 0  | 0  | William Wildsmith .....      | 2     | 0  | 0  |
| William West .....           | 5     | 0  | 0  | John Wilkinson .....         | 2     | 0  | 0  |
| P. Willans, jun. ....        | 5     | 0  | 0  | William Braithwaite .....    | 1     | 1  | 0  |
| Wm. Smith & Sons .....       | 4     | 4  | 0  | Joseph Buckton, jun. ....    | 1     | 1  | 0  |
| Charles Naylor .....         | 3     | 3  | 0  | Robert Ellershaw .....       | 1     | 1  | 0  |
| Rev. Charles Wicksteed ..... | 3     | 3  | 0  | Francis Lupton .....         | 1     | 1  | 0  |
| Sparke George .....          | 3     | 0  | 0  | Thomas Newsome .....         | 1     | 1  | 0  |
| Charles Makins .....         | 2     | 2  | 0  | Henry Broadhead .....        | 1     | 0  | 0  |
| John Nelson & Sons .....     | 2     | 2  | 0  | A Lady, by Mr. Teale .....   | 1     | 0  | 0  |
| John Armistead .....         | 2     | 0  | 0  | Mrs. Arthur Lupton .....     | 1     | 0  | 0  |
| G. K. Hirst, jun. ....       | 2     | 0  | 0  | E. S. Swaine .....           | 1     | 0  | 0  |
| C. & G. Matthewman .....     | 2     | 0  | 0  | John Wilson .....            | 1     | 0  | 0  |
| <i>Carried forward</i> ..... | £1003 | 14 | 0  | <i>Total</i> .....           | £1017 | 19 | 0  |

# REPORT.—MUSEUM FUND.

## Receipts.

|                                         | £.    | s. | d. |
|-----------------------------------------|-------|----|----|
| Subscriptions .....                     | 1017  | 19 | 0  |
| Old Chimney Piece and Stove.....        | 8     | 0  | 0  |
| Interest, Messrs. W. W. Brown & Co..... | 15    | 14 | 0  |
|                                         |       |    |    |
|                                         | £1041 | 13 | 0  |

## Disbursements.

|                                                    | £.  | s. | d. |
|----------------------------------------------------|-----|----|----|
| Transferred to Ordinary Account on account of Debt | 224 | 14 | 5  |
| Sundry Tradesmen's Bills .....                     | 628 | 5  | 1  |
| Wages paid to Workmen.....                         | 180 | 13 | 7  |
| Balance .....                                      | 7   | 19 | 0  |

£1041 13 0

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17

## THE PRINCIPAL ITEMS IN THE ABOVE ACCOUNT WERE:—

|                                                        | £.   | s. | d. |
|--------------------------------------------------------|------|----|----|
| <b>GEOLOGICAL ROOM.—Upright Cases .....</b>            | 161  | 12 | 7  |
| Horizontal ditto .....                                 | 40   | 16 | 5  |
| New Roof and Skylights .....                           | 215  | 15 | 0  |
| <b>ZOOLOGICAL ROOM.—Upright Cases in the Gallery..</b> | 130  | 0  | 7  |
| Palisading of Gallery altering                         | 27   | 8  | 4  |
| Zoological Cases .....                                 | 14   | 2  | 9  |
|                                                        |      |    |    |
| <i>Carried forward .....</i>                           | £569 | 15 | 8  |

|                                                            | £.   | s. | d. |
|------------------------------------------------------------|------|----|----|
| <i>Brought forward .....</i>                               | 589  | 15 | 8  |
| <b>ZOOLOGICAL ROOM.—Repairs of Skylight, Roof, &amp;c.</b> | 87   | 5  | 8  |
| <b>ANTIQUITIES ROOM.—Mummy Case .....</b>                  | 31   | 7  | 4  |
| Upright Cases, &c. ....                                    | 39   | 0  | 5  |
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| Specimens of Cannel Coal, containing<br>Remains of <i>Megalickthys</i> , from the<br>Wigan Coal Field .....                                                                       | } | Mr. Wm. Peace.                                                |
| Specimen of <i>Lepidodendron</i> from Har-<br>rogate, and of Carbonite of Lime<br>from Gibbet-Hill, Knaresborough                                                                 | } | Samuel Powell, jun. Esq. Har-<br>rogate.                      |
| Cast of a Head of <i>Ichthyosaurus</i><br><i>Communis</i> , found at Barrow-upon-<br>Soar, from a Specimen in the Mu-<br>seum of the Philosophical Society<br>of Birmingham ..... | } | The Council of the Birming-<br>ham Philosophical Institution. |
| Specimens of Arragonite from Ilfra-<br>combe, Devonshire; and Seven<br>Geological Specimens from the Isle<br>of Wight.....                                                        | } | Mr. Reynolds.                                                 |

- Several Fossils from the Magnesian Limestone of Garforth ..... } † Mr. T. P. Teale, F.L.S.  
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- Portion of the Root of Calamites Cannæformis ..... } Mr. C. J. Armistead.
- Specimens of Ulodendron Majus; Calamites decoratus; and Titanium, from Low Moor. Acicular Crystals of Quartz, in Limestone from Snowdon; Iron Stone, &c. .... } † Mr. Sparke George.
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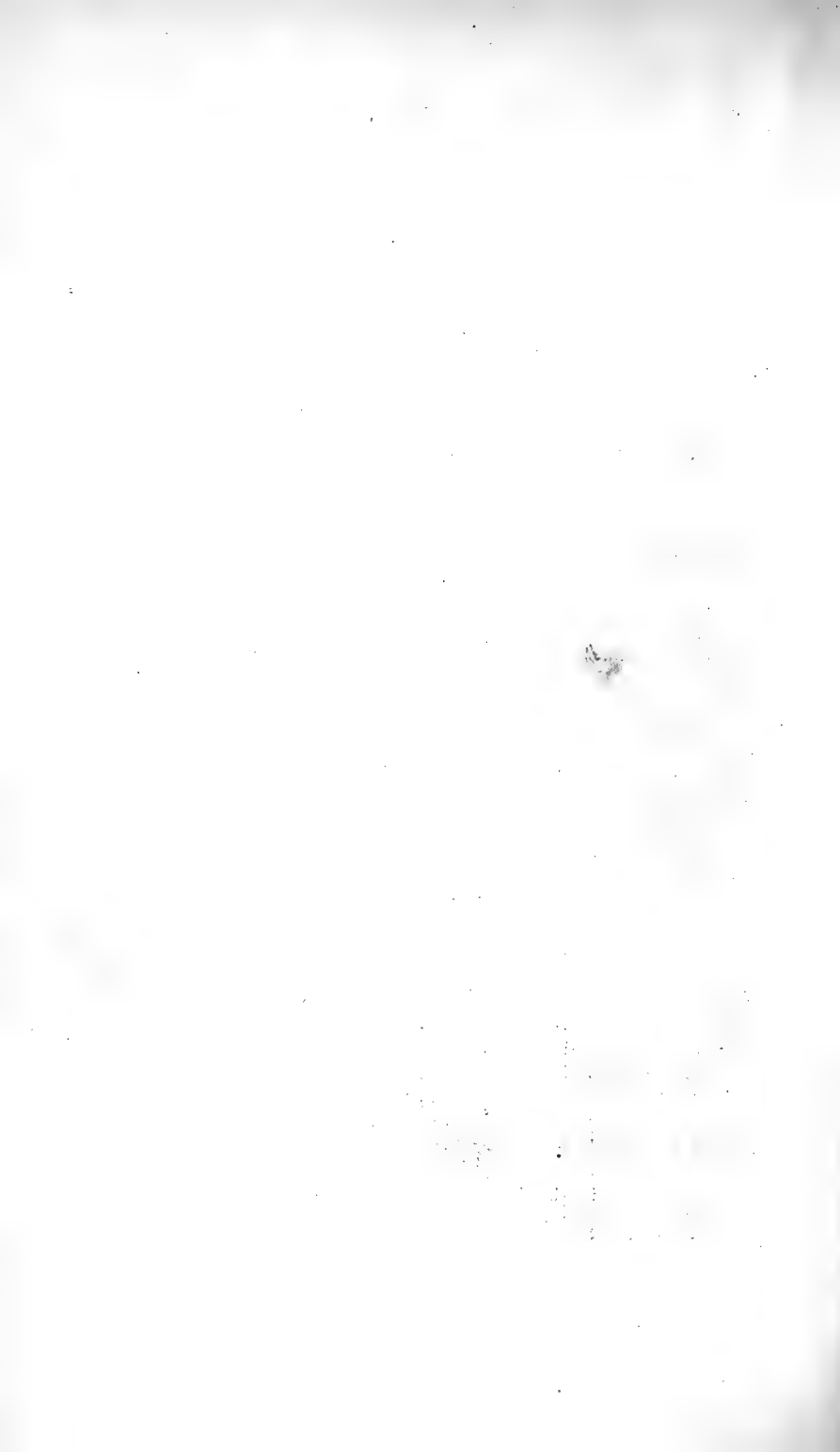
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- Thomas Stewart Trail, M.D. F.R.S. Professor of Medical Jurisprudence in the University of Edinburgh.
- Rev. W. V. Vernon Harcourt, F.R.S. and G.S. Vice-President of the Yorkshire Phil. Society, *Bolton-Percy*.
- Charles Waterton, Hon. Member of the Yorkshire Philosophical Society, and Bristol Institution, *Walton-Hall*.
- John K. Walker, M.D. *Huddersfield*.
- The Ven. Francis Wrangham, M.A. F.R.S. Archdeacon of Cleveland, Prebendary of York and Chester, F.C.P.S. Hon. Member of the Yorkshire and Hull Philosophical Societies, *Hunmanby*.
- Rev. G. Young, D.D. A.M. M.W.S. Hon. Member of the Newcastle, Yorkshire, and Hull Philosophical Societies, *Whitby*.



TWENTY-SECOND REPORT  
OF  
THE COUNCIL  
OF THE  
LEEDS  
PHILOSOPHICAL AND LITERARY  
SOCIETY,  
AT THE CLOSE OF THE SESSION,  
1841-2.

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LEEDS:  
PRINTED BY EDWARD BAINES AND SONS.

MDCCCXLII.



# REPORT OF THE COUNCIL,

AT THE CLOSE OF

## THE TWENTY-SECOND SESSION.

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IN reviewing the events of the Twenty-second Session of THE LEEDS PHILOSOPHICAL AND LITERARY SOCIETY for the year 1841-2, there appears to be little which requires to be recorded, or which affords grounds for comment; and although the Council cannot congratulate the Society on the close of a brilliant Session, yet they hope that, considering the period of general depression in which it has taken place, the result will in most respects be considered satisfactory.

In the department of Professional Lectures, which is one of the most popular features of this Society, the Council have been fully as liberal in their expenditure as the state of their finances warranted, especially as regarded the Lectures on "The Vocal Harmony of the different Italian Schools," by Mr. Edward Taylor, the Gresham Professor of Music, and the introduction of a choir more complete than on any former occasion; and

the result seems to have justified these extraordinary efforts, inasmuch as the Lectures,—which combined the attraction of concerts, and had the merit of producing the music of by-gone days in a degree of perfection hitherto generally unknown, and the interest of historical reminiscences,—called together so numerous an audience that it was necessary to hire the Hall of the Mechanics' Institution to afford sufficient accommodation.

The course of Six Lectures on Electro-Dynamics, Electro-Magnetic Telegraphs, Electro-Metallurgy, and the Solidification of Carbonic Acid, by Mr. Addams, afforded a decided change of subject, and were received with many unequivocal signs of approbation, as showing to those who were little acquainted with the particular branches of science treated of, the astonishing progress which had been made therein, and producing actual facts and experiments to those who were previously only acquainted with dry published details.

The following Papers were read during this Session :—

#### GENERAL MEETINGS.

1. "On the Scottish Universities"—by Dr. Hunter, *the President*—  
(Read Oct. 15th, 1841.)
2. "On the Psychology of Ancient Egypt, as illustrated by the Inscriptions on the Mummies in the Museum"—by Mr. Osburn,  
M.R.S. Lit.—(Read Nov. 5th, 1841.)

3. "Illustrations of Magnetic Phenomena and Original Discoveries in Magnetism"—by the Rev. Dr. Scoresby, F.R.S.—(Read Nov. 19th, 1841.)
4. "On the History of the Woollen Manufacture"—by the Rev. C. Wicksteed, *Vice-President*—(Read Dec. 17th, 1841.)
5. "On the Atomic Composition of Matter"—by Mr. William Sykes Ward, *Secretary*.
6. "On the Character and Writings of Lessing"—by Mr. Marcus—(Read Feb. 4th, 1842.)
7. "The Claims of the Inferior Animals"—by the Rev. R. W. Hamilton—(Read Feb. 18th, 1842.)
8. "On the Geological Features of the Swiss Alps; with Remarks on the most recent Theories as to the Formation of Glaciers, Moraines, and Erratic Blocks"—by Mr. J. I. Ikin—(Read March 4th, 1842.)
9. "A Review of some Portions of Professor Whewell's Philosophy of the Inductive Sciences"—by Mr. West—(Read March 18th, 1842.)
10. "On Gothic Architecture"—by Mr. Chantrell—(Read April 15th, 1842.)

The Council cannot but express their regret that the attendance at the General Meetings has greatly diminished during the past Session, and has in some cases been discouragingly small. They are not without the fear that this neglect will either deter members from offering their services, or weaken their ardour in preparing compositions which have hitherto done so much honor to all parties. The retiring Council hope that the ensuing Session will prove in this respect a contrast to that just closed.

It may be pleasing to record, that as the Society's Museum is becoming more and more perfect, it continues to create an increasing interest as a public feature, and it is to be hoped tends to cultivate the taste of the humbler classes of society, who see and find abundant opportunities of gratuitous admission: as a proof of this, it may suffice to mention that on Easter Monday and Tuesday about 1300 visitors were admitted, and that although the concourse was at times somewhat threatening, yet no damage ensued to any of the property of the Society.

The additions to the Geological department have not been so numerous as is desirable. The Museum is, however, indebted to one of its earliest benefactors, Thos. Meade, Esq., of Chatley Lodge, an Honorary Member, for several beautiful Ferns, from the coal field of Bath, Encrinital Stems, Alcyonites in flint, and shells from the green sand of Wiltshire.

The Council had the pleasure last year of reporting a valuable donation from the Chevalier Michelotti, of Turin. This year they have the gratification of recording another donation from the celebrated entomologist, Professor Burmeister, of Halle, who forwarded a stuffed specimen and skeleton of the Hamster, which is particularly interesting, as forming the connecting link between the true Rats (*Mus*) and the jumping Rats or



Jerboas (*Dipus*), as well as on account of its singular economy.

The Society is indebted to the liberality of the following gentlemen for the valuable additions to its Museum, lately purchased at the sale of part of the collection of Mr. Allis, of York. To the liberality of one of the Borough Members, Wm. Aldam, Esq., for a fine skeleton of the African Ostrich, the skeleton of a Spoonbill, and a highly interesting group of the two-toed Ant-eater and young. To one of the Curators, J. G. Marshall, Esq., for the skeleton of the American Ostrich and Secretary Bird, and a fine pair of the Capercaillie. To the President, Dr. Hunter, for a three-toed Sloth and a pair of Richardson's Skua; and to Mr. George Shaw, for a beautiful pair of the Merlin, all of which were much wanted in the Museum.

The death of an Elephant in Mr. Wombwell's Menagerie afforded an opportunity of adding its skeleton to the Museum at the moderate price of £20; but small as this sum was, the funds of the Society would not allow of so great an outlay for one specimen; and the Curators being desirous of enriching the collection by the addition of a series of specimens, illustrating the comparative anatomy of the different groups, felt anxious that an opportunity, which, in the ordinary course of events could not be expected to recur, should not be

allowed to pass ; and that although the Society possess the magnificent Skull of an Asiatic Elephant, presented by their early and constant benefactor, John Marshall, Esq., yet an illustration of the entire osteology of this interesting animal was of great importance ; and several gentlemen having engaged to raise a sufficient fund for its purchase and the completion of its preparation, the Council authorized the purchase. The bones are now prepared for putting together, but as little more than one-third of the money required is yet raised, the Council do not feel justified in completing its preparation until the necessary fund is realized.

Several important genera and species of both British and Foreign Birds have been added to the Museum by purchase, which the Curators considered it their duty to recommend, and the Council to sanction, in order that the Museum may keep pace with the rapid advances which other provincial collections are now making.

To Mr. A. Clapham, who has so frequently aided us before, thanks are again due for several birds presented by himself, and also for some beautiful specimens of Lepidopterous Insects, from Germany, presented through him by Mr. Charles Gruner, of Leipzig.

In the room devoted to the Miscellaneous Articles, Works of Art, Antiquities, &c., two or three accessions demand notice. A collection of Casts from ancient

Regal, Monastic, and Corporate Seals, and from some of the early Roman Coinage, has been presented by Wm. Thompson Thompson, Esq. A series of specimens illustrative of the Cotton Manufacture, by Mr. N. P. Simes, and another of the Worsted Manufacture in its various stages, by Messrs. E. and W. Wilkinson, serving to render more perfect the collection recorded in a former Report as exhibiting manufactures in a progressive state.

The serious indisposition of the President has rendered it impossible for him to pay his usual assiduous attention to the duties of his office, and the Council have to express their unfeigned regret at the cause of his absence.

An application from the Yorkshire Philosophical Society to unite in measures for promoting a Meeting of the British Association for the advancement of Science, at York, has revived the subject of sending an invitation for that body to come to Leeds,—an object which, whenever it is seriously entertained, would not be promoted, but delayed, by their visiting any other city or town in this part of the kingdom. The Council have not, however, believed that the subject has excited sufficient interest amongst their fellow-townsmen in general, to warrant their taking any steps at present.

The Council have again the unpleasant task of calling the attention of the Members in general, but

more particularly of the Proprietary Members, to the state of the Proprietary Account, which, having since the commencement of the Society been allowed to accumulate at compound interest, threatens at no very distant period to produce the most disastrous results.

The Council regret that the Report of this Session is somewhat unfavourable as regards pecuniary matters, and that there is a considerable balance due to the Treasurer, but hope that this will not be considered as discouraging to the prospects of the ensuing Session, but rather as a stimulus to exertion in endeavouring to increase the number of Members and Subscribers.

During the Session one additional ordinary Member and seven Subscribers have been elected, but the Council observe with regret that this number is not sufficient to supply the vacancies occasioned by the death of Members, and the loss of subscriptions caused by some of the ordinary Members having purchased Proprietary Tickets.

On the whole, while the past year is not to be considered among the most brilliant in the history of the Society, the Council have reason to feel convinced that the same enthusiasm in the cause of science and literature which led to its formation twenty years since, subsists in undiminished force in the breasts of many of those who took part in its first proceedings, and that all

which is requisite to maintain it on the high ground so creditable to the town of Leeds, which it has hitherto occupied, is that a corresponding spirit should animate the younger inhabitants of the town, on whom a succession of active Members must depend.

# LEEDS PHILOSOPHICAL AND LITERARY SOCIETY.

## PROPRIETARY ACCOUNT.

Balance due to the Treasurer..... £372 15s. 4d.

## ORDINARY ACCOUNT.

### Disbursements.

|                                                      | £.  | s. | d. |
|------------------------------------------------------|-----|----|----|
| To Balance due to Treasurer.....                     | 3   | 6  | 9  |
| Sub-curator's Salary and Expenses.....               | 120 | 0  | 0  |
| Insurance .....                                      | 8   | 8  | 4  |
| Tradesmen's Bills.....                               | 41  | 17 | 4  |
| Books and Stationery .....                           | 19  | 18 | 1  |
| Printing and Advertising .....                       | 24  | 10 | 6  |
| Taxes.....                                           | 29  | 5  | 6½ |
| Coal Gas .....                                       | 20  | 2  | 3  |
| Coals and Coke .....                                 | 17  | 10 | 4  |
| Purchase and Carriage of Specimens.....              | 17  | 14 | 9  |
| Sundry Expenses, Cleaning, &c.....                   | 16  | 11 | 6  |
| Postage of Circulars to Members .....                | 2   | 11 | 1  |
| Janitor .....                                        | 26  | 0  | 10 |
| Professor Taylor for Six Lectures .....              | 42  | 0  | 0  |
| Expenses attending Professor Taylor's Lectures ..... | 60  | 0  | 0  |
| Mr. Addams's Six Lectures.....                       | 31  | 10 | 0  |
| Interest, &c. to Bankers .....                       | 5   | 6  | 0  |
| Elephant .....                                       | 20  | 0  | 0  |
| Preparing the same, &c. ....                         | 4   | 12 | 0  |
| Balance in the Hands of Sub-Curator .....            | 2   | 0  | 6½ |

£513 5 10

To Balance brought forward,—£136 16s. 3d.....

### Receipts.

|                                                    | £.  | s. | d. |
|----------------------------------------------------|-----|----|----|
| By Error in last Year's Account .....              | 5   | 5  | 9  |
| Subscriptions of 114 Members, at 42s. each .....   | 239 | 8  | 0  |
| Ditto 42 Subscribers, at 21s. each .....           | 44  | 2  | 0  |
| Ditto and Deposit of 1 New Member.....             | 5   | 5  | 0  |
| Ditto of 7 New Subscribers.....                    | 7   | 7  | 0  |
| Arrears of Subscriptions .....                     | 13  | 18 | 0  |
| Fines .....                                        | 3   | 2  | 0  |
| Rent of Cellars under the Hall .....               | 20  | 0  | 0  |
| Professor Taylor's Lectures .....                  | 18  | 9  | 0  |
| Mr. Addams's Lectures.....                         | 2   | 17 | 0  |
| Admissions to the Museum .....                     | 0   | 7  | 6  |
| Use of Lecture Room .....                          | 2   | 2  | 0  |
| Received for Museum Fund from Mr. S. D. Martin ... | 2   | 0  | 0  |
| Subscriptions towards purchasing of Elephant ..... | 10  | 15 | 0  |
| Sale of Elephant Skin.....                         | 1   | 11 | 4  |
| Balance due to the Treasurer .....                 | 136 | 16 | 3  |

£513 5 10

By Balance in Hands of Sub-curator,—£2 0s. 6½d.

Audited by— H. J. MARCUS.



# DONATIONS AND ADDITIONS

TO THE

## SOCIETY'S MUSEUM.

*Those marked † are Members of this Society; thus • Honorary Members.*

### GEOLOGY AND MINERALOGY.

|                                                                                 |                                       |
|---------------------------------------------------------------------------------|---------------------------------------|
| Eleven Fossils from the Oolite of<br>Gilling Castle, near Helmsley ...          | Mr. J. Wigglesworth.                  |
| Specimens of Unio in Ironstone,<br>from Elsecar Coal field .....                | Mr. Hartop.                           |
| Fine Specimen of Iron Pyrites,<br>from a Coal pit, Allerton By-<br>water ... .. | Mr. Grosvener.                        |
| Boulders of Granite, from the Vale<br>of the Calder, near Halifax .....         | Mr. J. T. Clay, Raistrick.            |
| Two Aleyonites in Flint—Salisbury<br>Plain .....                                | Thomas Meade, Esq., Chatley,<br>Bath. |
| Aleyonium Quadratum — Black<br>Down, Devon .....                                |                                       |
| Five select Specimens of Enderbital<br>Stems—Frome .....                        |                                       |
| Three Specimens of Pecten quinque-<br>costatum, Isle of Wight.....              |                                       |
| Two Specimens of Venus, Green-<br>sand, Isle of Wight .....                     |                                       |
| Mass of Turrites in Siliceous Sand,<br>Devon .....                              |                                       |
| Six Plants from the Coal field—<br>Radstock .....                               |                                       |

- Several Geological Specimens from  
the Isle of Sheppey..... } † Dr. Hopper.
- A Collection of Fossils from the  
Calcaire grossier, Paris ..... } † Mr. Sparke George.
- Mass of Hazel Nuts from the Peat  
excavated in forming the Reser-  
voir at Eccup ..... } † Mr. J. W. Leather.
- Iron Pyrites from Alwoodley..... }

## ZOOLOGY.

- Frontal bone and horns of the Cha-  
mois (*Antelope rupicapra*) ..... } † Mr. Samuel Flood.
- Skeleton and Stuffed Specimen of  
the Hamster (*Cricetus vulgaris*).. } Professor Burmeister, Univer-  
sity of Halle.
- Specimen of the Flying Lemur  
(*Galeopithecus rufus*)..... } Mr. G. Kitson.
- Specimen of the Great Bustard  
(*Otis Tarda*) ..... } \* Mr. H. Denny.
- Collared Peccary (*Dicotyles torqua-  
tus*), and Roebuck (*Cervus ca-  
preolis*)..... } The Leeds Zoological and  
Botanical Society.
- Specimen of the Flying Squirrel  
(*Pteromys volucella*) ..... } Miss E. Hall, Leeds.
- Fine Specimen of the Rhinoceros  
Hornbill (*Buceros Rhinoceros*),  
and Eatable Rousette (*Pteropus  
edulis*) ..... } Purchased by the Society.
- Fine Pair of Ram's Horns..... } † Mr. Thomas Motley.
- Specimen of the Night Heron (*Ardea  
nycticorax*), Fulmer (*Procellaria  
glacialis*), Sheerwater (*Puffinus  
Anglorum*), Crested Titmouse  
(*Parus cristatus*) ..... } † Mr. E. J. Teale.



- Specimens of Cirl Bunting (*Emberiza cirrus*), Ortolan Bunting (*Emberiza hortulana*), Sand Martin (*Hirundo riparia*), Meadow Pipit (*Anthus pratensis*), Purple Heron (*Ardea purpurea*), Kite (*Milvus Ictinus*), Rose Ouzel (*Pastor roseus*), Peregrine Falcon (*Falco peregrinus*), Osprey (*Pandion Haliaeetus*), Harlequin Duck (*Anas histrionica*), Northern Diver (*Colymbus glacialis*) ..... } Purchased by the Society.
- Very fine Skeleton of the African Ostrich (*Struthio camelus*), Skeleton of the White Spoonbill (*Platalea leucorodia*), Male, Female and Young, of the Two-toed Ant-eater (*Myrmecophaga didactyla*) ..... } Wm. Aldam, Esq., M.P.
- Skeleton of the Secretary Bird (*Gypoggeranus serpentarius*), Skeleton of the South American Ostrich (*Rhea Americana*), Pair of the Capercaillie (*Tetrao urogallus*) ... } † J. G. Marshall, Esq.
- Specimen of the Eagle Owl (*Bubo Maximus*), Virginian Eagle Owl (*Bubo Virginianus*), and 20 Skins of North American Birds ..... } † Mr. A. Clapham.
- Fine Pair of the Merlin (*Falco Csalon*), Ditto Fieldfare (*Turdus pilaris*), Do. Missel Thrush (*Turdus viscivorus*)..... } † Mr. George Shaw.
- Specimen of the Three-toed Sloth (*Bradypus tridactylus*), Pair of the Grasshopper Warbler (*Salicaria locustella*), Pair of Richardson's Skua, (*Lestris Richardsonii*) } † Dr. Hunter, (*President.*)

|                                                                                                                                                                 |                                    |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------|
| Specimen of the Water Rail ( <i>Rallus aquaticus</i> ) .....                                                                                                    | † Wm. Gott, Esq.                   |
| Dun variety of the Rabbit ( <i>Lepus timidus</i> ) ..                                                                                                           | Mr. James Brown, Guildford-Street. |
| Specimen of the Sheeldrake ( <i>Tadorna vulpanser</i> ) .....                                                                                                   | † Mr. Joseph Teale.                |
| Skin of the Albatross ( <i>Diomedea exulans</i> )                                                                                                               | Mr. Kitchen.                       |
| Horn of the Rein Deer ( <i>Cervus Tarandus</i> ) .....                                                                                                          | Purchased by the Society.          |
| Skeletons of the Pied Wagtail, Bullfinch, Skylark, Redstart, Reed-Wren, Lesser Redpole, Kingfisher, Corncrake, Swallow, Brambling, Ferret, and common Rat ..... | Purchased by the Society.          |
| Very fine Head of the Pike ( <i>Esox Lucius</i> ).....                                                                                                          | † Mr. Samuel Smith.                |
| Specimen of the Stag Beetle ( <i>Lucanus Cervus</i> ) .....                                                                                                     | Mrs. Charnley, Eltham, Kent.       |
| Several fine Lepidopterous Insects from Germany.....                                                                                                            | Charles Gruner, Esq., Leipzig.     |

## MISCELLANEOUS.

|                                                                                                                              |                  |
|------------------------------------------------------------------------------------------------------------------------------|------------------|
| Impression of the Seal of St. Eleoth, Patriarch of Antioch.                                                                  | † Dr. Hopper.    |
| Specimens of Fine Merino Wool, grown by Lord Western, and of Merino Cloth manufactured from it—with an Account of the Sheep. | † Mr. S. Shaen.  |
| A series of Specimens illustrating the Cotton Manufacture in its different stages.....                                       | Mr. N. P. Simes. |

- A series of Specimens illustrative of  
the Worsted Manufacture, from  
the Raw Material to the Finished  
Fabric ..... } † Messrs. E. and W. Wilkin-  
son, Prospect Mill.
- Beads from an Egyptian Mummy ... } † Mr. Osburn (*Curator.*)
- A Chinese Newspaper ..... } Miss Nichols.
- Impressions of several ancient Seals } Mr. Ready.
- Impressions of Ancient Regal, Mon-  
astic, and Corporate Seals, viz.,  
Great Seal of Charles II., Edward  
I. and II., Merton Priory, Putney  
Abbey, Burlington Abbey, Selby  
Abbey, Newstead Abbey, Colling-  
ham Abbey, St. Mary's Abbey,  
York ; Gloucester Cathedral ;  
Anthony Bishop of Durham ; St.  
Andrew's Abbey, Rochester ; St.  
Mayne's, Orkney Isles ; Arch-  
bishop of York, York City Seal,  
Rochester Town Seal, Seal of the  
Mayor of York, Pontefract Town  
Seal, Winchester Town Seal, York  
Merchants' Company, Leeds Town  
Seal ; Casts from several of the  
early Roman Coins in the British  
Museum ..... } † Wm. Thompson Thompson,  
Esquire.
- Portion of the Trunk of an Apple  
Tree, brought from the Manor  
House of Woolsthorpe, near  
Grantham, Lincolnshire, the birth-  
place and family residence of Sir  
Isaac Newton ; said to be from  
the identical apple tree under or  
near which Sir Isaac was sitting  
when the fall of an apple turned  
his thoughts to the theory of grav-  
itation ..... } † Mr. J. W. Leather.

- Model of a Jangada, used on the  
Coast of Brazil by the Fishermen  
and for carrying Sugar, &c..... } J. Bramley Moore, Esq., by  
Dr. Hunter.

## LIBRARY.

- Reports of the West-Riding Geolo- } The West-Riding Geological  
gical and Polytechnic Society ... } and Polytechnic Society.
- Transactions of the Royal Society }  
of Edinburgh, vol. 14, part 2, vol. } The Royal Society of  
15, part 1, Proceedings of ditto, } Edinburgh.  
part 17-18 .....
- Eighteenth Report of the Whitby } The Whitby Philosophical  
Philosophical Society ..... } Society.
- Yarrell's British Birds, vols. 1 and 2, }  
Forbes's British Echinodermata... } Purchased by the Society.
- Procédés Gannel appliqué à la con- }  
servation indefinie, et sans mutila- } † Mr. Sparke George.  
tion des Oiseaux Quadrupedes, &c. }
- Proceedings of the Botanical Society } The Botanical Society of  
of London, vol. 1, part 1 ..... } London.
- Wicksteed on the relative power of }  
the Cornish and Boulton & Watt } The Author.  
Pumping Engines .....
- Hargreave on the Calculation of }  
Attractions and Figure of the } The Author.  
Earth .....
- Remarks on the Coins of Ephesus, }  
struck during the Roman Domi- } Rev. J. B. Reade, Stone  
nion ..... } Vicarage, near Aylesbury.
- A Review of Berkeley's Theory of }  
Vision—by Samuel Bailey, 8vo, } The Author.  
1842 .....

|                                                                                                                                      |                                                            |
|--------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------|
| Parliamentary Report on National<br>Monuments and Works of Art ...                                                                   | } Joseph Hume, Esq., M.P.                                  |
| Twelfth Report of the Scarborough<br>Philosophical & Literary Society.                                                               | } The Scarborough Philosophi-<br>cal and Literary Society. |
| The Proceedings of the Zoological<br>Society of London .....                                                                         | } The Zoological Society of<br>London.                     |
| The Proceedings of the Geological<br>Society of London .....                                                                         | } The Geological Society of<br>London.                     |
| Reports of the Natural History<br>Society of Northumberland, Dur-<br>ham, and Newcastle-upon-Tyne,<br>for 1834-5-6-7-8—1840-41 ..... | } The Council of Natural His-<br>tory Society.             |
| Several Numbers of the Naturalist<br>and Curtis's British Entomology.                                                                | } Rev. F. O. Morris, Ordsall<br>Rectory.                   |
| Nineteenth Annual Report of the<br>Sheffield Philosophical and Lit-<br>erary Society .....                                           | } The Sheffield Philosophical<br>Society.                  |

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SUBSCRIPTIONS TO THE FUND FOR PURCHASING THE
SKELETON OF THE ELEPHANT

	£.	s.	d.
T. P. Teale	1	0	0
Edwin Eddison	1	0	0
Robert Arthington	1	0	0
George Goodman	1	0	0
George Bischoff	1	0	0
Peter Fairbairn	1	0	0
John Tottie	1	0	0
William Sykes Ward	1	0	0
Joseph Bateson	1	0	0
Edward Liebreich	0	10	0
Charles Lupton	0	5	0
Joseph Buckton	0	5	0
H. S. Smith	0	5	0
John Wilkinson	0	10	0
Total	10	15	0

LIST

OF

OFFICERS, COUNCIL, AND MEMBERS.

OFFICERS.

President.....	John Hope Shaw.
Vice-Presidents	{ Rev. Joseph Holmes, D.D. Rev. R. W. Hamilton.
Treasurer	William Williams Brown.
Secretaries	{ Thomas Nunneley. William Sykes Ward.
Curator in Geology	J. G. Marshall, F.G.S.
„ in Zoology	T. P. Teale, F.L.S.
„ in Antiquities	Wm. Osburn, M.R.S., Lit.
Sub-Curator	Henry Denny.

COUNCIL.

H. J. Marcus.	George Shaw.
Joshua Ingham Ikin.	Matthew Hall.
William West.	T. T. Dibb.
Dr. Chadwick.	John Sangster.
Rev. C. Wicksteed.	John Atkinson.

PROPRIETARY MEMBERS.

Robert Arthington.	Newman Cash.
Edward Baines.	Henry Chorley.
George Banks.	John Cawood.
*R. C. Battye,	Samuel Clapham.
Edwin Birchall.	Abraham Clapham, <i>Potternewton.</i>
Alfred Birchall.	John Cudworth.
John Blayds, (2 shares.)	*Robert Derham.
Thomas Blayds.	Thomas T. Dibb.
Richard Bramley.	T. P. Dickinson.
James Brown.	Edwin Eddison.
William Williams Brown.	Rev. John Ely.
Christopher Beckett.	R. J. Ellershaw.
William Beckett.	John Ellershaw, jun.
John Burton.	S. G. Fenton.

* Members deceased whose Shares have not been transferred.

R. L. Ford.
 William Gatliff.
 Thomas Willington George.
 George Goodman.
 John Goodman.
 *Benjamin Gott, *Armley House*,
 (5 shares.)
 John Gott.
 William Gott.
 William Hey.
 Joseph Holdsworth, *Wakefield*.
 James Holdforth.
 John Jowitt.
 James Leather.
 John D. Luccock.
 Darnton Lupton.
 Francis Lupton.
 Charles Makins.
 Arthur Marshall.
 John Marshall, *Headingley*, (3 shares.)

James G. Marshall, F.G.S. (2 shares.)
 Henry Cowper Marshall.
 Thomas Motley.
 T. B. Pease.
 Rev. James Armitage Rhodes, A.M.
 Horsforth-Hall, (2 shares.)
 *M. T. Sadler.
 John Shepherd, jun.
 William Smith.
 T. W. Stansfeld.
 H. S. Smith.
 George Tatham.
 T. P. Teale, F.L.S.
 Thomas W. Tottie, *Beech-Grove*.
 William Walker.
 Robert Walker.
 Richard Basset Wilson.
 Robert H. Wood.
 Peter Willans.
 James Williamson, M.D.

ORDINARY MEMBERS.

J. R. W. Atkinson.
 John Atkinson, *East-Parade*,
 Edward Baines, jun.
 Frederick Baines.
 Robert Baker.
 Joseph Bateson.
 Joseph Batty.
 S. J. Birchall.
 G. W. Bischoff.
 Thomas Bischoff.
 Fearnie Bolland.
 Rev. W. H. Bathurst, A.M., *Barwick-*
 in-Elmet.
 Matthew Bloome.
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 William Braithwaite.
 William Brigg.
 Joseph Buckton.
 Thomas Bywater.
 W. R. Cass.
 William Cadman.
 John K. Clapham.
 R. D. Chantrell.
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 Joseph Chadwick.

Robert Craven.
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TWENTY-THIRD REPORT

OF

THE COUNCIL

OF THE

LEEDS

PHILOSOPHICAL AND LITERARY

SOCIETY,

AT THE CLOSE OF THE SESSION,

1842-3.

LEEDS:

PRINTED BY BOLLAND AND KEMPLAY.

MDCCCXLIII.

REPORT OF THE COUNCIL

AT THE CLOSE OF THE

TWENTY-THIRD SESSION.



Little has occurred during the past Session which demands a lengthened Report. The Council has, however, pleasure in being able to state that, compared with the two preceding Sessions, the one just closed is satisfactory. The attendance at the ordinary Meetings has been greater, and the discussions after the Papers more animated ; and a more general interest has been felt.

ONE new Honorary Member, two Ordinary Members, and THREE Subscribers have been elected : small as this number is, it is probably as large as in these times of pressure, and without any general canvass for new Members, could be reasonably expected. The state of the finances is not so flourishing as could have been wished, although the most rigid economy has been exercised. The debt against the Proprietary

account goes on steadily increasing ; it now amounts to £391. 13s. 4d., and, unless some prompt and decisive steps are at once taken to remove it, by the appropriation of Shares or a per Centage upon the present existing Shares, threatens at no very distant period, accumulating as it does at compound interest, to become a source of considerable embarrassment. The Council would urge upon Members of the Society generally attention to the subject ; for although it may be alleged, perhaps with some show of justice, that it is an affair which peculiarly belongs to the Proprietary Members, yet it must be admitted it most intimately concerns all who are anxious for the well-being of the Society.

The debt upon the ordinary account is also considerable, amounting to £205. 2s. 10d. This is not occasioned by any profuse or unusual expenditure, which indeed has in some particulars been less than usual, but in part from a deficiency in the annual subscriptions, occasioned by death and other causes, and in part from the heavier pressure of local taxation from which a few years past the Society was wholly exempted. This the Council look forward with much satisfaction to shortly again being the case, as it is hoped the Bills now before Parliament will for the future legally exonerate all similar scientific and literary Societies from such burthens.

During the Session three Courses of Lectures have been delivered. The first a Course of Nine Lectures by Mr. Nunneley, Hon. Secretary, "On the Anatomy and Physiology of the Organs of Digestion, Circulation, and Respiration." The second a Course of Four Lectures, by Professor Kidd, "On China." The third a Course of Six Lectures, by Mr. Sheridan Knowles, "On Dramatic Literature."

The attendance at these, particularly at the first and third Courses, has been good. Mr. Nunneley liberally declined to accept any compensation for his Lectures. The Council feel it to be both a debt of gratitude and an act of mere justice to that Gentleman to record their sense of the obligation he has thus conferred upon the Society, and of the talents and research evinced in the whole course of his Lectures, which were attended by large audiences, and listened to with great and constantly increasing interest till their close.

It will be seen that the amount received for admission to the Lectures is comparatively small. This is explained by the fact of the terms of membership and subscribership being so liberal as to render it more advantageous to join the Society than pay for admission to a single course of Lectures. This is what the Council would wish, desiring rather to attract persons permanently to the Society than to obtain an uncertain and

precarious income from such casual sources. The following is a list of the Papers read at the ordinary Meetings of the Society :—

1. "On Capital Punishments"—by the President, Mr. J. H. Shaw, read Oct. 21.
2. "Mr. Nunneley's Third Lecture—delivered Nov. 4.
3. "On the Influence of Locality, as conducive to Longevity"—Mr. Mathew Hall, read Nov. 18.
4. "On the Crusades"—by the Rev. R. W. Hamilton, read Dec. 2.
5. "On the Valley Formations of the Yorkshire Coal Field and the Discoveries made in the Yorkshire and Lancashire Coal Districts"—by the Rev. Wm. Thorp, A.M., read Dec. 16.
6. "On the Properties of Fluids"—by Mr. Charles Sangster, read Jan. 6.
7. "On Hydropathy"—by Mr. Atkinson, read Jan. 20.
8. "On the Progress of Man"—by Mr. Shaen, read Feb. 3.
9. "On the Life and Death of Mohammed"—by the Rev. Dr. Wolff, read Feb. 17.
10. "On the Principles of Colonization"—by — Chapman, Esq., read March 3.
11. "On the Forensic Advocacy of the Athenians"—by Robert Hall, Esq., A.M., read March 17.
12. "On the Geometric Principles of Gothic Architecture—by Mr. Chantrell, read April 7.
13. "Observations on the present state of Greece and Turkey, derived from a personal residence in those countries—by Mr. Hervie, read April 21.

The Council would recommend to their successors a following out the plan with regard to Lectures which has been pursued this Session, namely, to prevail upon one or more of the Members,—many of whom are so competent, to deliver a gratuitous Course of Lectures, upon a subject with which they are familiar, and then to engage some one eminent professional Lecturer for a single Course, by which it is hoped a sufficient sum will be placed at their disposal to secure the services of a first-rate man, without pressing unduly upon the funds of the Society, and yet that the interest of the Members through the entire Session shall be sustained. Indeed, the Council has pleasure in stating that they have so far obtained the consent of two gentlemen, each to give a course of Lectures during next Session, as to leave to their successors little more than the confirming the proposition.

But few additions have been made to the Library or Museum during the past year. The Donations have been more scanty than usual. One valuable present the Society has, however, received in the Statue of the late Mr. M. T. Sadler, who was in the earlier years of the Society one of its active Members, and who for long was upon the Council. For this the Society is indebted to the liberality of the artist, Mr. Park, who has engaged to come from

London at his own expense to see the Statue properly placed, which in a short time it probably will be, in the Vestibule, so soon as the pedestal is prepared. For this Mr. Chantrell has kindly furnished an appropriate design. The whole cost incurred by the Society is charges for the case with the carriage of the Statue from London, and the cutting of the stone for the pedestal, the stone itself having been presented by Mr. Hustler.

The Council has not felt justified in expending much upon the purchase of Specimens, especially as the greater part of the burden of paying for the Skeleton of the Elephant purchased last year from Mr. Wombwell (the subscription which several gentlemen undertook to collect for defraying the expense having, from one cause or other, in a great measure failed), has fallen upon the ordinary funds.

There is one feature connected with the Museum which must be regarded with much satisfaction, viz., the increasing interest felt by the public generally in it. During the Session more than 12,000 have obtained gratuitous admission, and that, notwithstanding, the crowds which on some holiday occasions (as, for instance, last Easter Monday or Tuesday, when 1505 people passed through the Museum) have been collected, no instance of injury to the furniture or

specimens has occurred ; and their conduct has been decorous and proper, affording a full proof, were it needed, of the propriety and advantage of affording every facility to all of becoming familiar with the works of nature and art ; the effect of which is twofold, and the benefits reciprocal : while the throwing open such collections has a humanizing and refining effect upon the public mind, all classes become warmly interested, not only in the protection and safety of the Specimens, but feel a honest pride, when in their power, of assisting and adding to their value by presenting what may be worthy of reception and preservation.

On resigning their trust, the Council beg strongly to urge upon every Member of the Society the importance of exertion during the recess, in order to prevail upon a larger number of our fellow-townsmen to become Members or Subscribers. Every year regularly deprives the Society, from death, change of residence, or other causes, of some of its old Members ; and unless their places should be supplied by an accession of new ones, its numbers must be constantly dwindling down, and its funds becoming more scanty. The Council are, however, persuaded that in this active and intelligent community (and especially amongst its younger members) there are many to whom it can

only be necessary to explain the advantages of the Institution, in order to induce them to join it ; and that, with a little exertion on the part of its friends, they may confidently hope, not only that its present numbers will be kept up, but that they may be increased to an extent which will insure its vigour and prosperity for many years.

LEEDS PHILOSOPHICAL AND LITERARY SOCIETY.

PROPRIETARY ACCOUNT.

Balance due to the Treasurer.....£391. 13s. 4d.

ORDINARY ACCOUNT.

Disbursements.		Receipts.	
	£. s. d.		
To Balance due to Treasurer.....	136 16 3	By Subscription of 105 Members.....	220 10 0
Sub-Curator's Salary and Expenses.....	120 0 0	Ditto 36 Subscribers.....	37 16 0
Insurance.....	8 8 4	Deposit of Two New Members.....	10 10 0
Tradesmen's Bills.....	32 8 11	Ditto of Three New Subscribers.....	3 3 0
Books and Stationery.....	9 0 6	Arrears of Subscriptions.....	21 1 0
Printing and Advertising.....	18 17 6	Fines.....	2 18 0
Taxes.....	34 18 6½	Rent of Cellars under the Hall.....	20 0 0
Coal Gas.....	16 6 8	Mr. Nunneley's Lectures.....	1 2 0
Coals and Coke.....	13 2 10	Professor Kidd's Lectures.....	1 10 6
Purchase and Carriage of Specimens.....	3 19 0	Sheridan Knowles's Lectures.....	8 3 0
Sundry Expenses, Cleaning, Postage, &c..	23 14 10	Admissions to the Museum.....	0 5 6
Janitor.....	26 0 0	Balance from Museum Fund.....	7 19 0
Professor Kidd, for Four Lectures.....	10 0 0	Bonus from Leeds and Yorkshire Fire Office	3 15 6
Sheridan Knowles, for Six Lectures.....	63 0 0		
Expenses, Diagrams, &c., Mr. Nunneley's			
Nine Lectures.....	9 9 0		
Interest, &c., to Bankers.....	10 6 0		
	£536 8 4½		
		Balance due to the Treasurer.....	338 13 6
			197 14 10½
			£536 8 4½

DONATIONS AND ADDITIONS

TO THE

SOCIETY'S MUSEUM.

*Those marked † are Members of this Society; thus * Honorary Members.*

GEOLOGY AND MINERALOGY.

- Shale containing Scales of Megalithy's Hibberti } Mr. Drabble.
- Milleporite from the Limestone of Zealand, Lancashire..... } Mr. C. J. Armistead.
- Mineralogical Specimens from Conis- ton, Lancashire..... } Mr. George Taylor.
- Fine Mass of Galena, from Harrogate } Mr. C. Greaves.
- Fine Specimens of Fossil Shells from the Lias and Dogger of Whitby... } Mr. G. Simpson.

ZOOLOGY.

- Specimen of the Common Martin (Martes Foina)..... } *Mr. A. Clapham.
- Specimen of the Brown Bear, Ursus Arctos } The Leeds Zoological and Botanical Society.

- Skeleton of the Common Otter (*Lutra*
Vulgaris) and Wild Cat (*Felis*
Catus) } Purchased by the Society.
- Male, Female, and Variety of the
Red Grouse (*Tetrao Scoticus*) ... } Mr. James Brown, Moortown.
- Specimen of the Gray Parrot (*Psit-*
tacus *Erythacus*)..... } Mr. Wm. Waite.
- Specimen of the Black and Yellow
Cassique (*Cassicus Persicus*), and
fine Skeleton of the American
Variety of the Domestic Cock..... } O. Brooke, Esq
- Skeleton of the Greater Spotted
Woodpecker (*Picus Major*), and
Specimen of the Little Bustard } Purchased by the Society.
(*Otis Tetrax*)
- Specimen of Ostracion } Master Cass.
- Specimen of the Natter Jack (*Bufo*
Calamita) } Mr. James Motley.
- Specimen of the Dory (*Zeus Faber*),
and Pair of the River Lamprey } Mr. Phillips.
(*Petromyzon Fluvialis*).....
- Specimens of Pipe Fish from the } *Mr. Thomas Pease.
Red Sea
- Specimen of the Great Pipe Fish }
(*Syngnathus Acus*), and a Snake } Dr. Charles Hare.
from South America.....
- Specimens of the Foetal Cases of the } *Mr. C. J. Armistead.
Skate
- Specimens of the Double Spotted } Francis Beaumont, Esq.
Goby (*Gobius Bipunctatus*)
- Nest and Eggs of the Golden-Crested } Master Wm. Gott.
Wren

Skull of a Cayman from the River
Orinoco, and Portion of the Verte-
bral Column of a Shark } Mr. James Frankland.

Fifty Shells from the East Indies ... } *Mr. Sparke George.

Fine Specimen of the African Scorpion }
(Scorpio Afer) } Dr. C. Hare.

Specimen of *Locusta Christii* } Mr. Thos. Heaps.

MISCELLANEOUS.

Human Dorsal Vertebra, found on
the Field of Waterloo six years
after the battle, 1821 } *Charles Makins, Esq.

A Feather Cap from the interior of
British Guiana, South America ; a
Calabash used for water, &c., by
the Arowoak Indians, South
America ; Piece of Sugar Cane... } Mr. James Frankland.

Bow and Arrows from South America } Dr. Charles Hare.

Thirty Casts from Ancient Seals..... } Mr. John Hey.

Calculus taken from a Horse } Mr. Mattw. Smith, Cawood Mills.

Rain Gauge, Evaporating Dish, &c. } Luke Howard, Esq., F.R.S.,
Acworth. K

A Statue of the late Michael Thomas } Patric Park, Esq., Sculptor,
Sadler, Esq., F.R.S. } London.

The Stone for the Pedestal for the
above Statue } John Hustler, Esq., Meanwood.

LIBRARY.

Report of the Birmingham Philo- } The Birmingham Philosophical
sophical Institution for 1841..... } Institution.

Notice respecting the Fossils of the
Mountain Limestone of Ireland, as
compared with those of Great
Britain, &c. } Richard Griffith, Esq., the Author,
Dublin.

- Transactions of the Manchester Philosophical Society, vol. 6. } The Manchester Philosophical Society.
- A Flora of Liverpool, by T. B. Hall and Wilson Armistead, 12mo..... } Mr. Wilson Armistead, Liverpool.
- Twenty-third Annual Report of the Royal Institution of Cornwall..... } The Royal Institution of Cornwall.
- Monografia del Genere Murex ossia enumerazione delle Principali specie del Terrani Sopracretacei Dell' Italia, per Giovanni Michelotti, Vicenza, 1841.....
- Saggio Storico Dei Rizopodi Caratteristici dei Terreni Sopracretacei, per Giovanni Michelotti, Modena, 1841
- Monografia degli Echinidi Fossili del Piemonte proposte dal Dottore Eugenio Sismondi, Torino, 1841... }
- Transactions of the Royal Society of Edinburgh, vol. 15, p. 11 } The Royal Society of Edinburgh.
- Fifth Annual Report of the Rocket Stations on the Yorkshire Coast, 1841
- Report of the York shire Philosophical Society } The Yorkshire Philosophical Society.
- *The Chevalier Michelotti, Turin.

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Thomas Campbell, *London*.
William Carey, *London*.
John Dalton, D.C.L., F.R.S., Corresponding Member of the French Institute, *Manchester*.
Henry Denny, A.L.S., Corresponding Member of the Academy of Natural Sciences of Philadelphia; Hon. Member of the Yorkshire Philosophical Society, and of the Norfolk and Norwich Museum, *Leeds*.
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John Field, *Low Moor*.
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Davies Gilbert, M.P., F.R.S., &c., &c., *London*.
George Goldie, M.D., *York*.
Robert E. Grant, M.D., F.R.S.L. & E. & F.L.S., G.S., Z.S., W.S., &c., &c., Professor of Comparative Anatomy and Zoology in the University of London, *London*.
Robert Hall, A.M., Barrister-at-Law, *London*.
B. R. Haydon, Historical Painter, &c., *London*.
Luke Howard, F.R.S., *Ackworth*.
J. F. W. Johnston, A.M., F.R.S., &c., Reader in Chemistry and Mineralogy in the University of Durham, *Durham*.
Robert Leyland, *Halifax*.
William M. Maude, *Knoctrop*.
Thomas Meade, F.R.S., *Chatley-Lodge*.
The Chevalier Michelotti, *Turin*.
James Montgomery, Hon. Member of the Yorkshire Philosophical Society *Sheffield*.
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John Spear, *London*.
Rev. William Thorp, A.M., *Womersley*.
Thomas Stewart Trail, M.D., F.R.S., Professor of Medical Jurisprudence in the University of Edinburgh.
Rev. W. V. Vernon Harcourt, F.R.S., F.G.S., Vice-President of the Yorkshire Phil. Society, *Bolton Percy*.
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John K. Walker, M.D., *Huddersfield*.
Rev. G. Young, D.D., A.M., M.W.S., Honorary Member of the Newcastle, Yorkshire, and Hull Philosophical Societies, *Whitby*.

TWENTY-FOURTH REPORT

OF

THE COUNCIL

OF THE

LEEDS

PHILOSOPHICAL AND LITERARY

SOCIETY,

AT THE CLOSE OF THE SESSION,

1843-44.

LEEDS:

PRINTED BY JOHN HEATON, STATIONER, 7, BRIGGATE.

MDCCCXLIV.



REPORT OF THE COUNCIL

AT THE CLOSE OF THE

TWENTY-FOURTH SESSION.

THE retiring Council do not consider it necessary to present to the Society any very lengthened Report, inasmuch as the Report of a Sub-Committee to inquire into the state of the Finances, has already been printed and distributed; to which the Council beg to direct your attentive consideration, both as regards the increasing Debt on the Proprietary Account, and the ordinary expenditure of the Society: subjects which have caused much anxiety to the Council, and for the removal of which a Plan has been devised which awaits the sanction of this General Meeting, and which it is confidently hoped the Members will respond to, not only by a liberal Subscription, but by every proper effort to obtain that increase of Members and Subscribers, which so large and populous a district ought to furnish.

The Debt upon the Proprietary Account, which at the close of the last Session amounted to £391. 13s. 4d. amounts now, by accumulation of interest, to the sum of £411. 11s. 4d. while the Debt upon the Ordinary

Account amounts to £250. 16s. 2d. being together £662. 7s. 6d.

In addition to this, the time has now arrived when the accommodation afforded to the Sub-Curator, Mr. DENNY, and his increasing family, is found to be altogether inadequate either for their comfort or even health, so that, even were the Council not anxious to afford to so worthy and valuable an officer every proper domestic convenience, the circumstances of the case would render an enlargement of the house absolutely necessary. A Plan has been kindly furnished by Mr. CHANTRELL, to whom, as on former occasions, the Society is under obligations for his gratuitous services, by which two additional rooms may be added to the house. These, together with some necessary alterations incidental to the reception of the Museum of the West-Riding Geological and Polytechnic Society, will require an expenditure of about £100.

It will be known to most of the Members, that the Debt upon the Proprietary Account was originally only £200, and arose from two shares being unappropriated, which, by accumulating at compound interest, has now become more than doubled.

For the purpose of paying off the Proprietary and Ordinary Debt, as well as the expenses of the alterations before alluded to, it is proposed immediately to originate a Subscription, which, by a little effort, will doubtless place the Society in a satisfactory position.

Whilst alluding to the Debt of the Society, the Council feel that it is but justice to themselves to refer to the items of Expenditure, by which it will be apparent that no lavish or needless appropriation of the Funds has taken place, but that the annual expenditure has not increased in any material item, except that the gradually increasing importance of the Museum, both in regard to its extent and the number of visitors, occasioning a corresponding outlay, the constant services of an attendant have been absolutely required, which until the last two or three years was not thought necessary, while the income of the Society has not increased in proportion, but, on the contrary, has decreased by the decease and removal of Members.

The Council have great pleasure in reporting, that during the Session, an arrangement has been made with the Geological and Polytechnic Society of the West-Riding of Yorkshire, by which its Museum, particularly valuable as illustrative of the Coal formation, will be deposited in the room of this Society lately appropriated for Antiquities,—these will be advantageously placed in other parts of the building. In the first instance, this will occasion some little outlay of money, but as the Geological and Polytechnic Society agreed to pay an annual rental of £30, this arrangement will doubtless ultimately prove of pecuniary advantage to both Societies, in addition to that increased value and attraction which the united Museums will possess over either separately.

The negotiations are now fully completed, and active measures are in progress for the removal of the Museum from Wakefield, and its setting up in the Hall of this Society.

The following Papers were read during the Session at the Ordinary Meetings, and although the attendance of Members was not on all occasions, so numerous as could have been wished, yet on the average it was much better than in some former Sessions :—

1. "On the Origin, Progress, and Present State of the English Jury System,"—by Mr. John Hope Shaw, *President*—(Read October 20th, 1843.)
2. "Is Phrenology to be considered a Science?"—by Dr. Hopper—(Read Nov. 3rd, 1843.)
3. "On Halos, Asteroids," &c.—by Dr. Chadwick—(Read November 17th, 1843.)
4. "On the Character of Richard III."—by the Rev. John Ely—(Read Dec. 1st, 1843.)
5. "On the Music of the English Church,"—by Professor Taylor—(Read Dec. 15th, 1843.)
6. "On some of the most interesting Passages in the History of English Criminal Jurisprudence,"—by M. T. Baines, Esq. Barrister-at-Law—(Read Jan. 5th, 1844.)
7. "On Combustion,"—by Mr. W. S. Ward—(Read Jan. 19th, 1844.)
8. "On the Significance of the Senses,"—by Dr. Drennan—(Read Feb. 2nd, 1844.)
9. "On Rhyme considered as an Element of Poetry,"—by the Rev. R. W. Hamilton, LL.D. D.D.—(Read Feb. 16th, 1844.)
10. "On the Voice, or the Structure and Functions of the Vocal Organs,"—by Mr. J. I. Ikin—(Read March 1st, 1844.)
11. "On Architecture as a Fine Art,"—by Mr. Nevins Compton—(Read March 15th, 1844.)
12. "On the Present State of India,"—by the Rev. Wm. Sinclair, A.M.—(Read April 12th, 1844.)
13. "On the Geology of the Town of Leeds and its Neighbourhood,"—by the Rev. Wm. Thorp, B.A.—(Read April 26th, 1844.)

During the past Session a course of Six Lectures on the "Early Music of the English Church," was delivered by Professor TAYLOR, these were effectively illustrated by a numerous and excellent Choir, ably conducted by Mr. BOOTH. This being an expensive Course, the Council, in the present state of the funds, did not feel justified in engaging any other professional Lecturer.

The Society is indebted to Mr. NEVINS COMPTON, for two interesting gratuitous Lectures on Architecture as a Fine Art, illustrated by very beautiful and instructive Drawings and Diagrams, and the Council hope Mr. COMPTON will pursue this important subject, on some future occasions, at greater length.

The Council have much satisfaction in stating, that the delivery of Courses of Lectures by Members of the Society, as recommended in the Report of a recent Session, is now becoming fully re-established, as affording advantages for the treatment of subjects which could not be brought within the compass of a single Paper, and that they are authorised to announce, that three gentlemen have promised Courses of Lectures for the ensuing Session, which will be of very high and varied interest.

Since the last Report, the Society has to regret the loss of three of its oldest members,—two of whom, Dr. HUNTER and Mr. HEY, have been removed by the hand of death. Mr. HEY, many years ago, filled the office of President, and had, from the origin of the Society up to

comparatively a recent period, taken an active part in its proceedings: while the oldest Members will recollect the perseverance and diligence Dr. HUNTER manifested at the formation of the Society, of which he was one of the first Secretaries, and by his activity in canvassing, was very instrumental in raising the funds necessary for the building of this Hall. By a change of residence to a distant part of the country, the Society is unfortunately deprived of the valuable services of the third gentleman, Mr. WILLIAM OSBORN, and the office of Curator in Antiquities, which Mr. OSBORN has so long filled, and for which he is so well qualified, is thus rendered vacant.

The British Association for the Advancement of Science, will hold their Annual Meeting at York during the Autumn, and, in pursuance of a wish expressed by the Local Council at York to obtain the co-operation of the different Literary and Scientific Societies in the county, your Council have prevailed upon their Curator in Geology, J. G. MARSHALL, Esq. to act as their Delegate upon the Local Council; another valuable Member of this Society, Mr. WEST, long an active Member of the British Association, having been already appointed by the Association itself, one of its Local Secretaries.

The Museum continues to receive accessions of Specimens, the importance and value of which, during the past, has exceeded that of most previous Sessions; for although the Council have thought it their duty to

decline making any extensive application of the Ordinary Funds of the Society for the purchase of Specimens, yet the liberality of individual Members and Friends has been almost unprecedented, very favourable opportunities having occurred for making purchases, by which the Museum has been enriched. Amongst the additions, the numerous and splendid group of Birds from the Himalaya Mountains, all of them new to the Society's Museum, as well as a most beautiful Specimen of the Lammer-geyer or Bearded Vulture, a complete set of Casts of the Regal Seals of England, and a series of Ichthyosaurian Fossils from the Lias of Barrow-upon-Soar in Leicestershire, deserve particular mention. The names of the individuals to whose liberality the Society is indebted, will be found in the annexed List of Donations.

One of the most important features of the Museum, is the attraction which it continues to afford to many thousand visitors, many of whom are in the humbler ranks of life, and who, by their decorous conduct, evince the interest which they feel in the contemplation of the wonderful remains of past ages, and the beauties of the objects of Natural History.

LEEDS PHILOSOPHICAL AND LITERARY SOCIETY.

PROPRIETARY ACCOUNT.

Balance due to the Treasurer..... £411 11s. 4d.

ORDINARY ACCOUNT.

Disbursements.

	£.	s.	d.
To Balance due to the Treasurer	197	14	10½
Sub-Curator's Salary and Expenses.....	120	0	0
Insurance	8	8	4
Tradesmen's Bills	20	10	9
Books and Stationery	7	6	6
Printing and Advertising	14	13	0
Taxes.....	20	7	0
Coal Gas	18	10	0
Coals and Coke	10	2	1
Purchase and Carriage of Specimens	10	14	3
Sundry Expenses, Cleaning, Postage, &c.	18	4	6½
Janitor	26	0	0
Professor Taylor, for Six Lectures	42	0	0
Expenses attending Illustrating Ditto.....	42	0	0
Share of Expenses for obtaining Exemption from Taxes	10	0	0
Interest to Banker	8	11	0
	<u>£575</u>	<u>2</u>	<u>4</u>

ACCOUNTS UNPAID.

Balance due to the Treasurer	251	18	10
Tradesmen's Bills unpaid (estimated at).....	23	11	10
Expense of getting Rules confirmed by Barrister.....	1	7	0
	<u>£276</u>	<u>17</u>	<u>8</u>

Estimated Deficiency.....

Receipts.

By Subscription of 102 Members	£.	s.	d.
34 Subscribers	214	5	0
" " 7 New Subscribers	35	14	0
Fines	7	7	0
Half Year's Rent of Cellars	4	18	0
Professor Taylor's Lectures	10	0	0
Mr. Pitman for use of Lecture-Room	8	10	0
Admissions to the Museum	2	10	0
One Annual Ticket of Admission to the Museum.....	0	12	6
Arrears of Subscription for former Years.....	0	5	0
Balance due to the Treasurer	39	2	0
	<u>£575</u>	<u>2</u>	<u>4</u>

ACCOUNTS UNRECEIVED.

Subscriptions	38	11	0
Arrears of former Years	8	12	0
Half Year's Rent of Cellars	10	0	0
Fines	0	12	0
Estimated Deficiency	219	2	8
	<u>£276</u>	<u>17</u>	<u>8</u>

Estimated Deficiency..... £219. 2s. 8d.

DONATIONS AND ADDITIONS

TO THE

SOCIETY'S MUSEUM.

*Those marked (+) are Members of this Society—thus (*) Honorary Members.*

GEOLOGY AND MINERALOGY.

Iron Pyrites from the Allerton-Bywater Coal Pits	} Mr. Wood.
Very fine Pillar of Rock Salt, weighing 15 cwt. from Cheshire	} Messrs. Jonathan Dickinson and Son.
Alum Shale and Iron Stone Shale, from Whitby	} † Sparke George, Esq.
Very select and valuable Specimen of the Ichthyosaurus Communis, from the Lias of Barrow-on-Soar, Leicestershire.....	} † J. G. Marshall, Esq. † Wm. Beckett, Esq. M.P. † John Marshall, Esq. Halstead.
Three interesting Heads of the Ichthy- osaurus Communis; exhibiting the Scle- rotic Bones of the Eye and Ramus of the Lower Jaw, &c.....	} † Rev. Dr. Holmes. † J. G. Marshall, Esq. † H. C. Marshall, Esq. † Arthur Marshall, Esq. † C. G. Maclea, Esq.
Specimen of Dapedius Orbis, and two other Fossil Fish, from the Lias of Barrow-on- Soar	} † Rev. W. H. Bathurst. † Darnton Lupton, Esq. † Wm. Smith, Esq. Burley. † Arthur Lupton, Esq. † Hamer Stansfeld, Esq.
Several Mountain Limestone and Tertiary Fossils from America	} Wm. Aldam, Esq. M.P.
Several Scales and Teeth of Fish with Co- prolites, from the Coal Shale of Newton, near Wakefield	} Mr. Martin Simpson, Whitby.

ZOOLOGY.

Skeletons of the Ruff—Creeper—Stonechat
 —Rock Pipit—Starling—Rose Ouzel—
 Mealy Redpole—and Solitary Snipe..... } Purchased by the Society.

A Collection of Twenty-four Foreign and
 Five British Birds, new to the Society's
 Collection, comprising—

The Bearded Vulture (*Gypætus Barba-*
tus)

Pair of the Golden Breasted Tragopan (*Tra-*
gopan Hastingsii)

Pair of the Impeyan Pheasant (*Lopho-*
phorus Impeyanus)

Pair of the Pucras Pheasant (*Euplocomus*
Pucrasii)

Pair of the White Crested Pheasant (*Eu-*
plocomus Albocristatus)

Pair of Stacy's Pheasant (*Phasianus*
Staceii)

Pair of the Bankiva Cock (*Gallus Ban-*
kiva)

Nepaul or Horned Tragopan Male (*Trago-*
pan Satyrus)

Pair of the Common Francolin (*Perdix*
Francolinus)

Chuckar Partridge (*Perdix Chukar*)

Pair of the Painted Partridge (*Perdix*
Picta)

Two Partridges unknown

Tropic Bird (*Phæton Phænicurus*)

Barbary Turtle Dove (*Turtur Risoria*) ...

Aromatic Vinago (*Vinago Aromatica*)

Pair of the Bearded Titmouse (*Calamophi-*
lus Biarmicus)

Pair of the Hawfinch (*Fringilla Cocco-*
thraustes)

Dartford Warbler (*Melizophilus Provin-*
cialis).....

Presented by the following
 Members of the Society:—

† Wm. Smith, Esq. Burley.

† Robert Arthington, Esq.

† J. G. Marshall, Esq.

† H. C. Marshall, Esq.

† Arthur Marshall, Esq.

† T. W. Tottie, Esq.

† John Sangster, Esq.

† Joseph Bateson, Esq.

† C. G. Maclea, Esq.

† Joseph Taylor, Esq.

† John Atkinson, Esq.

† J. D. Luccock, Esq.

† George Goodman, Esq.

† Arthur Lupton, Esq.

† T. T. Dibb, Esq.

† Rev. W. H. Bathurst.

† R. W. Simpson, Esq.

† William Beverley, Esq.

† Anthony Titley, Esq.

† Thomas Nunneley, Esq.

† Hamer Stansfeld, Esq.

† Darnton Lupton, Esq.

Very fine Specimen of the Concave Horn- bill (<i>Buceros Bicornis</i>), from Mallacca ...	† Anthony Titley, Esq.
Specimen of the Solitary Snipe (<i>Scolopax</i> Major)	† Thos. Nunneley, Esq.
Skeletons of the Gannet—Eider Duck— Green Sandpiper, and Black Rat. Skulls of the Dorsetshire and Wallachean Rams.....	Purchased by the Society.
Skeletons of the Spanish Goose and Mus- covy Duck.....	The Leeds Zoological and Bo- tanical Society.
Specimen of the Spectacled Cayman (<i>Cro- codilus Scelerops</i>)	Rev. J. J. Freeman, London.
Eight Birds from Australia, viz:—Pink Eyed Shoveller (<i>Malacorhynchus Mem- branaceus</i>).....	C. E. Langdon, Esq.
Pair of the Sacred Kingfisher (<i>Halcyon</i> Sanctus)	
Pair of the Mock Diamond Bird (<i>Pardalo- tus Striatus</i>)	
Pair of the Chinese or King Quail (<i>Synoi- cus Chinensis</i>)	
And a Species of <i>Stepera</i> ..	
Two Birds from Australia, viz:—Tawny- shouldered Podargus (<i>Podargus Humera- lis</i>)	† Joseph Bateson, Esq.
Magnificent Pigeon (<i>Carpophaga Magni- fica</i>)	
Azure-breasted Porphyrio (<i>Porphyrio Bel- lus</i>)	Purchased by the Society.
Pair of the Satin Bower Bird (<i>Ptilonorhyn- chus Holosericeus</i>) from Australia	
Egg of the Great Bustard (<i>Otis Tarda</i>) ...	† Abraham Clapham, Esq.
Pair of the Little Bitten (<i>Botaurus Minu- tus</i>)	
And three Mice from Iceland	

Skulls of the Badger, Coatamunda, New- foundland Dog, and Ring-tailed Mon- key	} † Thomas Pease, Esq.
Sixteen North American Birds, viz:—Or- chard Oriole, Red-breasted Thrush, Cow Bunting, Cedar Bird, Blue Robin, Yellow- billed Cuckoo, Red-shouldered Oriole, &c.	} Townend Glover, Esq. New York.
Young Specimen of the Green Turtle (Che- lonia Mydas).....	} John Graveley, Esq. Horton.
Specimen of Madrepora Alcecornis	} Mr. A. Moffatt.
Specimens of Daubentons Bat (Vespertilio Daubentonii).....	} Purchased by the Society.
Skeleton of Ditto	
Specimen of the Black Rat (Mus Rattus)...	
Skeletons of the Rabbit (Lepus Cuniculus), Robin, Hen Harrier, Montagues Harrier, Pied Flycatcher, House Martin, Sand Martin, Kentish Plover, Goldfinch, Short- toed Lark, Sky Lark, Herring Gull, Stormy Petrell, Common Gull	
Two Hundred Foreign Insects	} † H. S. Smith, Esq.
Three Species of Unio from North America	} Wm. Aldam, Esq. M.P.

MISCELLANEOUS.

Penny and Halfpenny Tokens of the Pro- vince of New Brunswick	} Wm. Aldam, Esq. M.P.
Penny and Halfpenny Tokens of the Pro- vince of Nova Scotia	
Quarter Guinea Gold Coin of George I. ...	} Miss Oates, Leeds.
Musket Ball and Bones, from the Battle- Field of Clifford-Moor	} Mr. W. S. Taylor.
Roman Dish, Urn, and Fragments of Pot- tery, found at the Mount, near York ...	} † Thomas Pease, Esq.

A Series of Casts of the Great Seal of
England, from Edward the Confessor to
William IV. Presented as under:—

Obverse and Reverse of the Seals of Ed-
ward the Confessor, William I. William II.

Henry I. Stephen, and Henry II.	† John Gott, Esq.
Ditto Henry II. Richard I. and John	Mr. S. Scatchard.
Ditto Henry III.	† J. Buckton, Esq.
Ditto Henry III.	† Wm. Cadman, Esq.
Ditto Edward I.	† John Heaton, Esq.
Ditto Edward II.	† Thos. Pease, Esq.
Ditto Edward III. (4 Seals)	† Wm. Hey, Esq.
Ditto Richard II.	Wm. Singleton, Esq.
Ditto Henry IV.	† G. W. Bischoff, Esq.
Ditto Henry V.	† Thos. Bischoff, Esq.
Ditto Henry VI.	Messrs. Beverley & Simpson.
Ditto Edward IV.	† Matthew Bloome, Esq.
Ditto Edward V.	† T. W. Tottie, Esq.
Ditto Richard III.	† R. L. Ford, Esq.
Ditto Henry VII.	† J. R. Hubbard, Esq.
Ditto Henry VIII.	† John Shepherd, Esq.
Ditto Edward VI. and Mary	† Hamer Stansfeld, Esq.
Ditto Philip and Mary, and Elizabeth	† Richard Bramley, Esq.
Ditto James I.	† R. H. Wood, Esq.
Ditto Charles I. and Oliver Cromwell	† C. G. Maclea, Esq.
Ditto Richard Cromwell	† F. W. Tetley, Esq.
Ditto Charles II.	† W. F. Stow, Esq.
Ditto James II.	J. Lofthouse, Esq.
Ditto William and Mary	† Peter Fairbairn, Esq.
Ditto Anne (2 Seals)	† Robert Walker, Esq.
Ditto George I.	† Thos. Strother, Esq.
Ditto George II.	† Thomas Bywater, Esq.
Ditto George III.	† Darnton Lupton, Esq.
Ditto George IV.	† Francis Lupton, Esq.
Ditto William IV.	† S. J. Birchall, Esq.
Sixty large Anatomical Drawings	Mrs. Thackrah.

LIBRARY.

Report of the Society for obtaining Free Admission to National Monuments, &c.	} The Committee.
Annual Report of the Yorkshire Philosophical Society for 1842	} The Yorkshire Philosophical Society.
Annual Report of the Worcester Nat. Hist. Society for 1841-42.	} The Worcester Nat. Hist. Society.
Annual Report of the Birmingham Philosophical Institution for 1843	} The Birmingham Philosophical Institution.
Proceedings of the Zoological Society of London for 1841	} The Zoological Society of London.
Proceedings of the Geological Society of London	} The Geological Society of London.
Agassiz's Poissons Fossiles, livraisons xvii. and xviii. completing the Work.....	} † John Marshall, Esq. Halsteads.
A Paper on the Relative Properties of Iron made by the use of cold and hot Air Blast, read before the West-Riding Geological Polytechnic Society, July 1842 ...	} Henry Hartop, Esq. the Author.
Observations during Magnetic Disturbances in 1840-41, 4to.	} By order of the British Government.
Sketch of an Address delivered before the Literary and Philosophical Institution of Cheltenham, Oct. 1843	} Dr. Disney Thorp, the Author.
Transactions of the Royal Society of Edinburgh, vol. xv. part 3, 4to. 1844	} The Royal Society of Edinburgh.

L I S T

OF

OFFICERS, COUNCIL, AND MEMBERS.

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	{ Rev. R. W. Hamilton, LL.D. D.D.
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" in Zoology	{ T. P. Teale, F.L.S.
" in Antiquities	{ Thomas Nunneley.
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John Blayds, (2 shares)	Robt. John Ellershaw
Thomas Blayds	John Ellershaw, jun.
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John Burton	William Gatliff
Newman Cash	Thomas Wellington George
John Cawood	George Goodman

* Members deceased whose Shares have not been transferred.

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 *Benj. Gott, *Armley-House*, (5 shares)
 John Gott
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 Joseph Holdsworth, *Wakefield*
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 John Darnton Luccock
 Darnton Lupton
 Francis Lupton
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 Jas. Garth Marshall, F.G.S. (2 shares)
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 John Rothery Hubbard
 John Wright Hugall
 John Arthur Ikin
 Joshua Ingham Ikin
 Benjamin Jackson
 Christopher Kemplay
 John Wignall Leather
 Charles Lee
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 Samuel Dickinson Martin
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 William Willock
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 Samuel Birchall
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 W. M. Hall
 John Heaton
 Richard Hutchinson
 George Hyde
 William Ingham
 R. C. Jowitt
 James Kitson
 John Lofthouse

A. Lupton
Arthur Lupton, jun.
Charles Lupton
Joseph Lupton
Miss M. A. Oates
Miss P. C. Oates
J. H. Oates, jun.
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William Carey, *London*.

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Rev. G. Young, D.D. A.M. M.W.S. Honorary Member of the Newcastle, Yorkshire, and Hull Philosophical Societies, *Whitby*.

TWENTY-FIFTH REPORT

OF

THE COUNCIL

OF THE

LEEDS

PHILOSOPHICAL & LITERARY

SOCIETY,

AT THE CLOSE OF THE SESSION,

1844-45.

LEEDS:

PRINTED BY EDWARD BAINES AND SONS.

MDCCCXLV.

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REPORT OF THE COUNCIL

AT THE CLOSE OF THE

TWENTY-FIFTH SESSION.

IN presenting the Report of the proceedings of the Twenty-fifth Session of the Leeds Philosophical and Literary Society, the retiring Council beg to refer to the Financial Report, delivered to the Members prior to the close of the last Session.

Immediately after the election of the Council for the past Session, very complete arrangements were made for the institution of an active canvass of the Proprietary and Ordinary Members of the Society, and of other parties whose standing in the town and neighbourhood rendered it probable that they might become contributors to the funds of the Society, for the purpose of soliciting donations to the funds, and obtaining an accession of new Members and Subscribers.

The List of Contributors appended to this Report will show that considerable success has attended the exertions of the Canvassers; many parties from whom liberal contributions may be confidently expected have not yet been seen;

it is, however, hoped, that early in the ensuing Session the canvass will be completed.

LIST OF DONATIONS.

£.	s.	d.	£.	s.	d.		
Christopher Beckett, Esq.	25	0	0	Rev. W. Sinclair, A.M....	5	0	0
Wm. Beckett, Esq., M.P.	25	0	0	Darnton Lupton, Esq.....	5	0	0
Wm. Wms. Brown, Esq.	25	0	0	Robert Arthington, Esq.	5	0	0
John Gott, Esq.....	25	0	0	James Ogle, Esq.....	5	0	0
J. G. Marshall, Esq.	25	0	0	Christ. Kemplay, Esq. ...	2	2	0
H. C. Marshall, Esq.....	25	0	0	Dr. Thorp	2	0	0
Arthur Marshall, Esq.....	25	0	0	C. G. Maclea, Esq.	2	2	0
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Hamer Stansfeld, Esq.....	10	0	0	Thos. Nunneley, Esq. ...	2	2	0
Brown Hargreaves, Esq	10	0	0	Rev. Dr. Holmes	2	0	0
Peter Fairbairn, Esq.....	10	0	0	Rev. Dr. Hamilton	2	0	0
Dr. Chadwick	5	0	0	Thomas Hall, Esq.....	1	1	0
W. S. Ward, Esq.....	5	0	0	J. H. Oates, Esq.....	1	0	0
John Sangster, Esq.	5	0	0	The Misses Oates	2	0	0
George Shaw, Esq.	5	0	0	Dr. G. P. Smith	1	1	0
John Atkinson, Esq. (Sol.)	5	0	0	R. L. Ford, Esq.....	3	0	0
Edwin Eddison, Esq. ...	5	0	0	William West, Esq.	3	0	0
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Francis Lupton, Esq.....	5	0	0	A Friend, per Mr. Ward..	0	10	0
Matthew Hall, Esq.	5	0	0	John Atkinson, Esq., East			
Messrs. W. Smith and Son	5	0	0	Parade	2	0	0
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Thomas Strother, Esq....	5	0	0	F. W. Tetley, Esq.	3	3	0
John Jackson, Esq.				J. D. Luccock, Esq.	2	2	0
(Headingley)	5	0	0	Thomas Bischoff, Esq....	1	1	0
Mrs. Blackburne	5	0	0	G. W. Bischoff, Esq	1	1	0
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John Cudworth, Esq.....	5	0	0	Joshua Wordsworth, Esq.	2	0	0
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Anthony Titley, Esq.....	5	0	0	Dr. Heaton.....	2	0	0
T. W. Tottie, Esq.	5	0	0	Miss Fearne.....	1	1	0
H. J. Marcus, Esq... ..							

As a further result of the canvass, the Council have the pleasure of announcing an additional and more permanent source of income in the accession of the following Nine Ordinary Members, and Sixteen Subscribers :—

LIST OF NEW MEMBERS & SUBSCRIBERS.

REV. WM. SINCLAIR, A.M.

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JOHN BULMER.

REV. THOS. NUNNS, A.M.

JOSEPH GILL.

WILLIAM FENWICK STOW.

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AYRTON GATLIFF.

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JAMES RICHARDSON.

JAMES KITSON.

J. W. READ.

DUNCAN SIDEY.

THOMAS WALSH.

DR. IRVINE.

DR. RONAYNE.

J. H. OATES, JUN.

EDWARD GRACE.

RICHARD BOWLBY.

The total sum collected from the above Donations, with the Payments of Members and Subscribers, amounts to £485 17s., of which £175 has been paid to the Proprietary Account, and £310 17s. to the Ordinary Account.

The munificent offer of Wm. Aldam, Jun., Esq., to take a proprietary share of £100, being upon the condition that the balance of the proprietary debt and interest should be paid, and this not having been accomplished, the Society is not yet in a position to claim the amount.

The Ordinary Debt is now nearly liquidated, but on the Proprietary Account there yet remains a balance of £257 9s. 4d., and some interest due to the Treasurer.

The Council have not yet felt themselves justified in making the very necessary additions to the domestic accommodation of Mr. Denny, the Sub-Curator, but hope that the improved state of the finances, and the liberality of the Members who have not already contributed to the Society, will shortly enable them to do so.

The following Papers have been read at the Ordinary Meetings, and, with one exception, have been furnished by Members of the Society. They will bear comparison, both as to the interest and variety of subjects, with the Papers of any preceding Session :—

1. "On the History and Effects of the Feudal System in England,"—by Mr. John Hope Shaw, *President*.—(Read Oct. 18th, 1844.)
2. "On the recent Application of Electricity to the Arts,"—by Mr. Martyn J. Roberts, F.R.S.E.—(Read Nov. 1st, 1844.)
3. "On the Nations which have Conquered and Colonized England,"—by Mr. Arthur Lupton, Jun.—(Read Dec. 6th, 1844.)
4. "On the Education and Recreation of the Physical Powers,"—by Mr. J. I. Ikin.—(Read Dec. 20th, 1844.)
5. "On the Vibrations of Musical Tones,"—by Mr. W. S. Ward.—(Read Jan. 24th, 1845.)
6. "On the Physical and Intellectual Nature of Man as adapted to the present World,"—by the Rev. William Sinclair, M.A.—(Read Feb. 7th, 1845.)
7. "On the Historic Epoch of Ferdinand and Isabella of Spain,"—by the Rev. Dr. Hamilton.—(Read Feb. 21st, 1845.)
8. "On Prognostics in Meteorology,"—by Dr. Chadwick.—(Read March 7th, 1845.)
9. "On the Wars of the Fronde,"—by Mr. Hamilton Richardson.—(Read March 28th, 1845.)
10. "On the Relations between Animal and Vegetable Organization,"—by Dr. Heaton.—(Read April 4th, 1845.)
11. "On the Characteristics of Spanish Literature," (concluded from the Session of 1840-41—by Mr. Boyes.—(Read April 18th, 1845.)

In accordance with the Financial Report of the last Session, the Council did not feel justified or called upon to engage any professional Lecturers.

The gratitude of the Society is eminently due to the gentlemen who gave their time and talents for the preparation of the following Courses of Lectures :—

FOUR LECTURES “ On the Structure and Functions of the Brain and Nervous System in Man and the Inferior Animals,”—by Mr. Nunneley.

THREE LECTURES by Mr. West, “ On Chemical Analysis.”

A Course of Lectures was promised by the Rev. Dr. Hamilton, one of the Vice-presidents, but the state of his health rendered it imperatively necessary that the delivery of the Lectures should be deferred. The Council hope that the health of this valued and constant friend of the Society will speedily be restored, and that the Society will yet have the benefit of his Lectures at an early period.

It is hoped that, during the ensuing Session, the improved state of the finances of the Society will enable the succeeding Council to present to the Members at least Two Courses of Lectures of more than usual attraction.

The attendance at the Papers and Lectures was, on the average, equal to that of former Sessions.

The Council cannot congratulate the Society on any considerable accessions to the Museum during the last Session, as it is too evident that the application for pecuniary assistance for more important purposes has diverted the sources which have in other Sessions enriched

the collections in the various departments of Natural History; nevertheless some important additions will be found, on inspection of the List of Donations.

The Museum of the Geological and Polytechnic Society of the West Riding of Yorkshire has now been removed to the Hall of this Society, in pursuance of the arrangement mentioned in the last Report; and as the united Museums already contain one of the best collections of the organic remains of the coal formations of the North of England, and more especially of the immediate neighbourhood, the Council doubt not but the arrangement will be found to promote the interests of both the Societies, and stimulate the study of local Geology.

It is gratifying to notice the continued interest manifested by the humbler classes of society, who, in considerable numbers, avail themselves of gratuitous admission to the Museum, and apparently derive benefit from the inspection of the varied objects of interest to which they have access. As a proof of this, on the Monday and Tuesday in Easter week last, not less than 1,300 visitors were admitted to the Museum, and without the slightest damage to the specimens, or any impropriety of demeanour, having been noticed.

LEEDS PHILOSOPHICAL AND LITERARY SOCIETY.

PROPRIETARY ACCOUNT.

Dr.	£. s. d.	Cr.	£. s. d.
To Balance due to the Treasurer.....	432 9 4	By Donations towards liquidating the Debt due to the Treasurer.....	175 0 0
		Balance due to the Treasurer.....	257 9 4
	<u>£432 9 4</u>		<u>£432 9 4</u>

ORDINARY ACCOUNT.

Disbursements.	£. s. d.	Receipts.	£. s. d.
To Balance due to the Treasurer at the close of last Session.....	251 18 10	By Subscriptions of 93 Members.....	195 6 0
Sub-Curator's Salary and Expenses.....	120 0 0	" 32 Subscribers.....	33 12 0
Insurance.....	8 8 4	Subscriptions and Deposits of 9 New Members.....	47 5 0
Tradesmen's Bills.....	74 13 7½	" " 16 New Subscribers.....	16 16 0
Books and Stationery.....	11 11 10½	Fines.....	3 3 0
Printing and Advertising.....	21 2 6	Half Year's Rent of Cellars.....	10 0 0
Taxes.....	12 11 4	Mr. Nunneley's Lectures.....	0 10 0
Coal Gas.....	6 7 7½	Mr. West's Lectures.....	0 5 0
Coals and Coke.....	12 11 4	17 Admissions to the Museum, at 6d. each.....	0 8 6
Purchase and Carriage of Specimen and Preparation of do.....	16 3 0	Arrears of Subscriptions for former Years.....	23 6 0
Sundry Expenses, Cleaning, Postage, &c.....	1 3 8	Donations towards liquidating the Debt due to the Treasurer.....	246 16 0
Janitor.....	18 6 8	Balance due to Treasurer.....	11 2 11
Expenses of Mr. Nunneley's Lectures.....	26 0 0		<u>£588 10 5</u>
Expenses of obtaining Exemption from Taxes (Rules confirmed by Barrister).....	6 10 0		
Interest to Banker.....	1 7 0		
	<u>12 6 0</u>		

ACCOUNTS UNRECEIVED.

West Riding Geological and Polytechnic Society, for Rent, &c.....	45 0 0
Subscriptions and Fines.....	36 4 0
	<u>£81 4 0</u>

DONATIONS AND ADDITIONS

TO THE

SOCIETY'S MUSEUM.

~~~~~  
*Those Marked (†) are Members of this Society.*  
 ~~~~~

GEOLOGY AND MINERALOGY.

- | | | |
|--|---|---------------------------------|
| Specimens of Ammonite Shale from Moor
Allerton | } | Mr. Ellis. |
| Radius of a Deer found in the Alluvial
Gravel in digging a foundation in Hun-
slet Lane..... | } | Mr. Robert Arthington. |
| 187 Specimens of Fossils, from the Lon-
don Clay, Oxford Clay, Chalk, Green
Sand, Coral Rag, Kelloway's Rock, &c. | } | T. G. Lowe, Esq., Chippenham. |
| 97 Specimens of Fossils from the Upper
Ludlow Rock, of Kendal, and Caradoc
Sandstone at Coniston Waterhead,
and Three Ferns from the Coal
Measures of Shrewsbury | } | † J. G. Marshall, Esq., Curator |
| Specimen of Calamites Cannæformis | } | Mr. J. Walsh. |
| Fine Mass of Carbonate of Barytes from
Wensleydale | } | Mr. J. Tattersall. |
| Fine Root of Calamites Decoratus | } | † Mr. A. Clapham. |

ZOOLOGY.

- | | | |
|---|---|--------------------|
| Specimen of a Lepidopterous Larva, with
Sphœria Robertsonii growing from its
Anal extremity, from the Bay of Islands,
known in the Island as the Vegetating
Caterpillar | } | Mr. C. E. Langdon. |
|---|---|--------------------|

Skins of Leopard, Pigmy Antelope, Genette, Hoopoe, Kingfisher, &c., from Africa.....	}	Edwd. Smith, Esq., London, by Mr. Nunneley.
Skeleton of a Young Wolf (<i>Canis Lupus</i>)	}	Mr. Thomas Stansfeld.
A Young Alligator (<i>Crocodylus Lucius</i>)...	}	The Zoological and Botanical Society of Leeds.
Pair of <i>Vespertilio Pipistrellus</i> (The Pipistrelle Bat).....	}	† Mr. Nunneley, (Curator.)
Specimen of the Painted Tanager	}	O. Brooke, Esq.
Living Specimen of a Foreign species of Bombyx, caught in Sandford Street, Leeds	}	Mr. Joseph Spence.
Skeleton of the Flying Squirrel (<i>Ptero- mys Volucella</i>) ...	}	Mr. J. D. Hall.
Nine Bottles of Reptiles and Lepidopter- ous Larva, in Spirits, from America ...	}	† Mr. A. Clapham.
Gray Variety of the Common Hare	}	† Mr. E. J. Teale.
Skin of the Indian Boa (<i>Python Tigris</i>)...	}	† William Hey, Esq.
34 British Birds, viz.:—Gannet, Kestrel, Rough Legged Buzzard, Hooded Crow, Jay, White Starling, Field Fare, King- fisher, Pair of Yellow Wagtails, Ditto Lesser Whitethroats, Ditto Common Buntings, Ditto Snow Buntings, Ditto Quail, Blue Titmouse, Marsh Titmouse, Ox-eye Titmouse, Lesser Red Pole, Greater Red Pole, Spotted Gallinule, Little Grebe, Red-necked Grebe, Great- crested Grebe, Foolish Guillemot, Stormy Petrel, Smew, Tree Lark, Hedge War- bler, and Common Gull	}	Mr. Thos. Stansfeld.
Skeleton of the White-headed Eagle } (<i>Haliaëtus Leucocephalus</i>)	}	The Leeds Zoological and Botanical Society.

Specimen of the Rose-breasted Cockatoo }
 from Australia } † Edwin Eddison, Esq.

MISCELLANEOUS.

A Stethoscope } Mrs. Dr. Hunter.

A Button from the Coat of Captain Cook,
 purchased of his Niece..... } Benjamin Goodman, Gent.

Five Impressions of ancient Seals of the
 City of Norwich } Mr. Ready.

Model of an Esquimaux in his Canoe, made
 by the Natives } † Mr. Wm. Hay, Park-square.

Model of Bailey's Eve at the Fountain ... } Benjamin Goodman, Gent.

The Shears which belonged to Arthur
 Mangey, Goldsmith, of Leeds, (who was
 executed in 1696, for counterfeiting the
 current coin of the realm,) found in the
 Roof of an old House in Briggate, sup-
 posed to have been his residence; also
 a Copy of his Trial }
 Norrison Scatcherd, Esq.,
 Morley.

Bones and Specimens of Pottery from a
 Roman Encampment at Roundhay } Mr. Ellis.

A Hortus Siccus of British Plants } Mrs. Hey.

LIBRARY.

Report of the Liverpool Royal Institution } The Liverpool Royal Institu-
 tion.

Transactions of the American Philoso-
 phical Society, vol 9, part 1, new series,
 4to, 1844 }
 The American Philosophical
 Society, Philadelphia.

Proceedings of the American Philoso-
 phical Society, and Celebration of the
 100th Anniversary, 8vo, 1843 }

Proceedings of the Geological Society of London	}	The Geological Society of London.
An Essay on Organic Remains, as con- nected with an Ancient Tropical Re- gion of the Earth, by Thomas Gilpin, Esq., Philadelphia	}	The Author.
Geology as a Branch of Education, an Inaugural Lecture before the College of Civil Engineers at Putney	}	Professor D. T. Ansted, F.R.S. &c., the Author.
Transactions of the Royal Society of Edinbro', vol. xv. part iv.....	}	The Royal Society of Edinbro'.
Proceedings of the Academy of Sciences of Philadelphia, No. 6, 8vo	}	The Academy of Sciences, Philadelphia.
Dr. D anglison's Discourse on P. S. Du Ponceau, LL.D	}	The American Philosophical Society.

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„ in Zoology.....	{ T. P. Teale, F.L.S.
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William Beckett.
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Thomas Blayds.
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John Wilkinson.
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William Carey, *London*.
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B. R. Haydon, Historical Painter, &c., *London*.
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Robert Leyland, *Halifax*.
William M. Maude, *Knoctrop*.
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James Montgomery, Honorary Member of the Yorkshire Philosophical Society, *Sheffield*.
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Thos. Stewart Trail, M.D., F.R.S., Professor of Medical Jurisprudence in the University of Edinburgh.
Rev. W. V. Vernon Harcourt, F.R.S. F.G.S., Vice-President of the Yorkshire Philosophical Society, *Bolton Percy*.
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John K. Walker, M.D., *Huddersfield*.
Rev. G. Young, D.D., M.W.S., Honorary Member of the Newcastle, Yorkshire, and Hull Philosophical Societies, *Whitby*.



TWENTY-SIXTH REPORT

OF

THE COUNCIL

OF THE

LEEDS

PHILOSOPHICAL & LITERARY

SOCIETY,

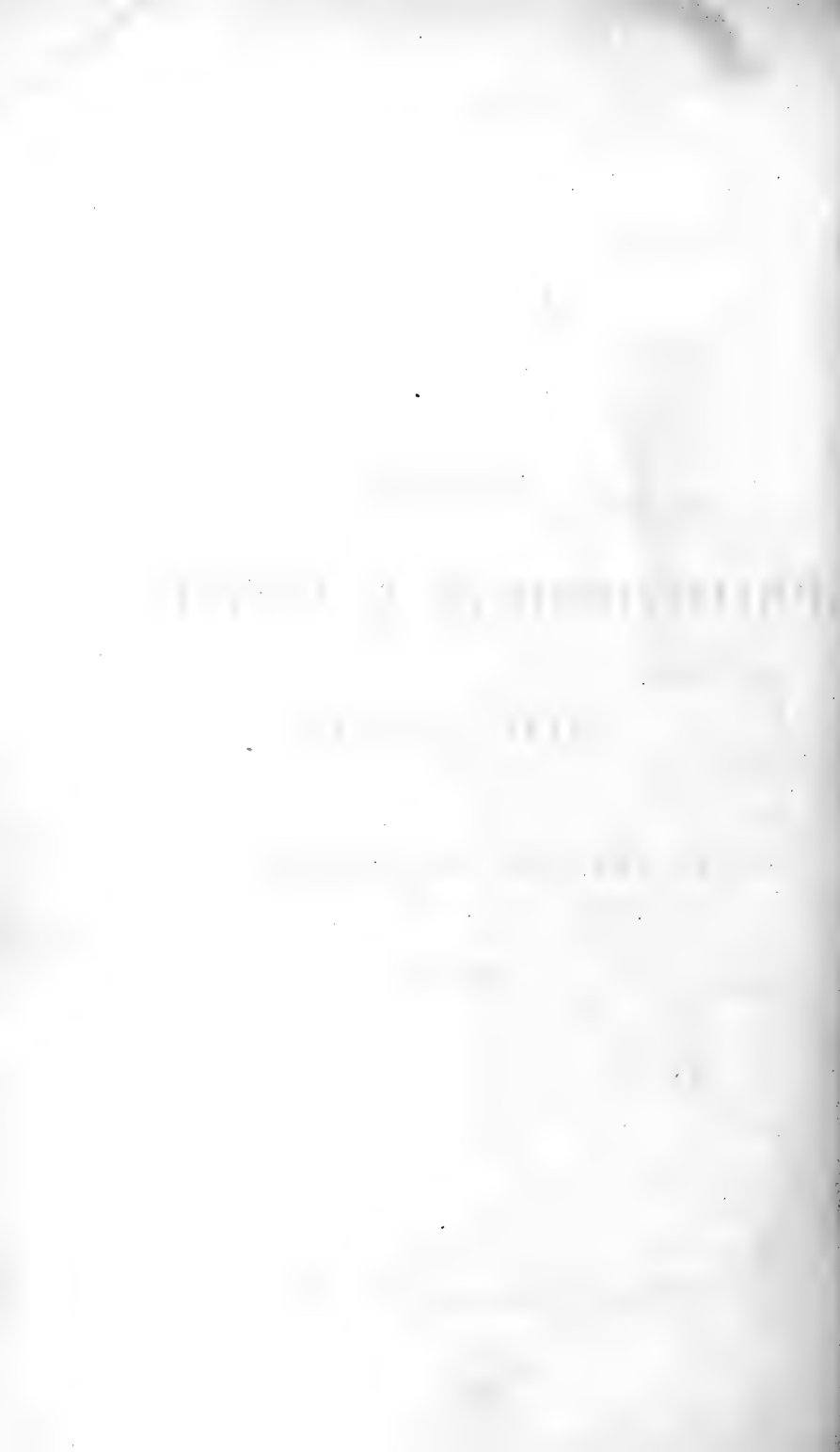
AT THE CLOSE OF THE SESSION,

1845-46.

LEEDS:

PRINTED BY EDWARD BAINES AND SONS.

MDCCCXLVI.



REPORT OF THE COUNCIL,

AT THE CLOSE OF THE

TWENTY-SIXTH SESSION.

AT the close of the Twenty-sixth Session of this Society, the Council have to lay before its Members a Report of the more remarkable events which have taken place in it; and in the fulfilment of this duty, they feel there is much cause for congratulation.

The Papers read at the General Meetings of the Society, during the past Session, have embraced subjects as varied and interesting as those of any former period, and the attendance of the Members, though in some cases not so large as desirable, was, generally, better than in many former Sessions. Several of the Papers having been furnished by gentlemen residing at a distance from Leeds, the Council take this opportunity of expressing the thanks of the Society to those gentlemen.

The following are the titles of the Papers:—

1. "On the Rise and Progress of Constitutional Liberty in Ancient Rome"—by the Rev. W. Sinclair, A.M., *President*—(Read Oct. 17th, 1845.)

- . "On the Rise, Growth, Maturity, and Prosperity of English Literature"—by Mr. W. H. Leatham—(Read Nov. 7th, 1845.)
3. "On the General, as distinguished from the Professional, Advantages of a Classical Education"—by the Rev. C. Weidemann—(Read Nov. 21st, 1845.)
4. "On Etruscan Antiquities"—by the Rev. John Ely—(Read Dec. 5, 1845.)
5. "On the Revolution of 1688, considered especially with reference to the Conduct and Character of King William III."—by Mr. Joseph Holmes, B.A.—(Read Dec. 19th, 1845.)
6. "On the Past and Present Modes of Intercourse"—by Mr. C. Kemplay—(Read Jan. 2nd, 1846.)
7. "On Mistaken Aims at Health and Longevity"—by Dr. Heaton—(Read Jan. 16th, 1846.)
8. "On the Characteristics of Writers on the French Revolution—Hazlitt, Scott, Smythe, Carlyle, Thiers"—by the Rev. C. Wicksteed, B.A.—(Read Feb. 6th, 1846.)
9. "On the Comparative Advantages of the Methods of applying Locomotive Power on Railways, particularly as regards the Atmospheric System"—by Mr. W. S. Ward, *Honorary Secretary*—(Read Feb. 20th, 1846.)
10. "On the Varied Appearance of the Heavens as viewed from several of the Planets in the Solar System"—by Mr. Thomas Dykes, of Hull—(Read March 6th, 1846.)
11. "On the Capture of Constantinople, and its Effects on Society in Europe"—by the Rev. Thomas Nunns, A.M.—(Read March 20th, 1846.)
12. "On the Character of the Athenians"—by the Rev. C. Sangster, A.M.—(Read April 3rd, 1846.)
13. "On Telescopes, especially on the Earl of Rosse's Gigantic Instruments"—by the Rev. Dr. Scoresby, F.R.S.—(Read April 17th, 1846.)

The following Courses of Lectures were also delivered :—

Five Readings from Shakspeare, by Mr. Charles Kemble.

Three Lectures “On the Recent Expedition to Bokhara,” by the
Rev. Dr. Wolff.

Five Lectures “On the Application of Steam Power and the Atmospheric Principle to Railways,” by Mr. Addams.

Two Lectures “On Italian Literature,” by Signor Bompiani.

One Lecture “On the Overland Route to India,” by Lieutenant
Waghorn.

The anticipations held out in the last Report with respect to Courses of Lectures have been more than realised. The Course of Readings from Shakspeare, by Mr. Charles Kemble, was delivered under circumstances somewhat unprecedented in the annals of the Society, and, therefore, requires particular notice. Mr. Kemble’s terms were so much higher than have usually been paid by the Society, that considerable doubt was at first entertained on the subject of his engagement; but so great an interest was displayed by many influential Members of the Society, who liberally attached their names to a guarantee fund, that the Council decided to engage him.* It was also found necessary to engage the saloon of the Music Hall, the Lecture Hall of the Society being quite inadequate to accom-

* The following are the gentlemen who contributed to this fund :—J. R. W. Atkinson, Esq., C. Beckett, Esq., Wm. Beckett, Esq. M.P., P. Fairbairn, Esq., J. Gott, Esq., W. Gott, Esq., H. C. Marshall, Esq., and D. Lupton, Esq.

moderate the audience. The attendance was even more than anticipated, as appears by the receipt of £103 18s. for tickets of admission to the readings, sold to non-subscribers; but the total expenditure, including £105 paid to Mr. Kemble, amounted to £129 17s. 2d., leaving a deficiency of £25 19s. 2d. which was met by the guarantee fund. The Society thus received a very intellectual treat without encroaching upon the ordinary funds of the Society.

The Lectures delivered by Dr. Wolff were equally successful, very great interest having been manifested to hear from so celebrated a man, some account of his extraordinary mission to Bokhara. In this instance the receipts somewhat exceeded the expenditure.

The Lectures delivered by Mr. Addams were highly interesting, and most admirably illustrated. The attendance was not, however, so numerous as on the former Courses.

The Council have great pleasure in announcing, that the additions to the Sub-curator's residence, alluded to in last Report, have now been completed. The expense of these has somewhat exceeded the estimate; but when the alterations were commenced, the arrangement of the original building required a slight deviation from the plan; and it was found advisable to add three rooms instead of two, as before contemplated, as this could be effected by a small additional outlay.

The Council have not been successful in reducing the proprietary debt since the last Report; and, notwithstanding the strictest economy, the amount paid for the alteration of the building has somewhat increased the balance due to the Treasurer on the ordinary account.

It has been suggested to the Council that a public Soirée might be held in the Society's Rooms with advantage; and they would, therefore, recommend to their successors in office, the careful consideration of this project, from a conviction that, if well carried out, with sufficient variety and attraction, it would form a fresh feature in the Society's proceedings.

During the past year the Society has had to regret the decease of two old and valued Members. In John Marshall, Esq., the Society at large will recognize one of the earliest and most firm supporters of this Institution from its commencement, in which he took so active and prominent a part. Indeed, it is mainly to him and to the late Benj. Gott, Esq., that we owe the building in which we assemble; and it is a matter of regret that the Hall of this Society does not possess some lasting memorial, in the form of a bust, of the most prominent of its founders. At the first meeting in 1821, Mr. Marshall was elected President, and held that office for five successive years; and when his entry into Parliament, and other public calls on his time, induced him to withdraw from the more active duties of office, he

continued to manifest his interest in the welfare of the Society until the last, by affording pecuniary assistance whenever occasion required his support, or his counsel and advice in suggesting alterations in the management of its affairs, when a change in its constitution appeared necessary. Mr. Marshall was a most liberal patron of science and scientific institutions both in his native town and elsewhere; and the two branches not immediately connected with his commercial pursuits, which, more especially, claimed his attention, were Political Economy and Geology, on both of which subjects he had delivered Lectures before the Society; and the copy of the splendid and costly work on Fossil Fish, by Agassiz, in our Library, was expressly subscribed for by him, to present as a mark of his regard for this Institution, and his wish to encourage the author in so laborious an undertaking.

The second loss we have to allude to is that of Dr. Williamson, who was also one of the earliest Members of the Society, and continued to take a lively interest in its literary proceedings, by the contribution of both Lectures and Papers, until his removal from Leeds. He filled with great efficiency the several offices of Secretary, Vice-president, and President, and was a Member of the Council for many years. As the patron of every Institution which had for its object the furtherance of science and literature, or the spread of education amongst the operative and juvenile branches

of the community, the name of Dr. Williamson will be long remembered, not only by his surviving coadjutors, but by the town at large.

Although the individual contributions to the Museum of the Society this Session have been less numerous than usual, this is amply compensated for by the interest and importance of some accessions. Amongst the most valuable may be mentioned the donation of invertebrate animals from the Bay of Messina, including the fine specimen of the *Argonauta Argo*, with its Shell, Ova, &c., from Andrew Melly, Esq., of Liverpool, a gentleman well-known in the scientific world, to whom the Society have, on former occasions, been indebted for donations to the Museum; as a slight mark, therefore, of their sense of his liberality, the Council proposed his enrolment amongst their Honorary Members; and he was accordingly elected.

The well-known and extensive Geological collection of the late Miss Benett, of Norton House, Wilts, having been offered for sale to the Society, the Council, though fully sensible that acquisitions of vast importance to the Museum were thus placed within their reach, could not, nevertheless, sanction any appropriation of the Society's funds for this purpose, and were, therefore, compelled to decline so advantageous an offer. Two Members of the Society, J. G. Marshall and John Blayds, Esqrs., most zealously undertook the task of raising the required amount

to secure a portion of the collection ; and thus, for the sum of £103, a most valuable series of specimens, illustrative of the London Clay of Hampshire and the Isle of Wight ; the Upper and Lower Chalk, Chalk Marl, and Upper Green Sand of Wiltshire ; the Lower Green Sand of Farringdon, Wealdon Formation ; Portland Beds of Tisbury ; Oxford Clay of Weymouth ; Lias of Lyme Regis ; and Mountain Limestone of Frome, were selected, and with especial reference, as much as practicable, to the diagnostic Fossils of each system.

By this timely and munificent aid of the Members whose names are recorded, the Geological department has been enriched by many specimens of great beauty, belonging to different formations of the secondary and tertiary periods, of which the Museum was heretofore very deficient.

The Council have also great pleasure in reporting that in the Middle Paleozoic series, of which the Museum at present possesses not a single example of the organic remains of this early period, the Society have the promise of a collection of those singular forms of Fishes peculiar to the Old Red Sandstone, from Caithness, &c., from the President, Rev. William Sinclair, A.M., which they hope will be incorporated with the collection before next Session, and thus another and most important Geological epoch will be illustrated.

To two of our Members, Thomas Pease and Robert Arthington, Esqrs., the Museum has been indebted for some interesting and valuable Fossils. To the former, from the newer Pliocene formations of the Island of Malta, and the Lias of Bristol; and to the latter, for a fine series of specimens illustrating the structure of the Pear Encrinite, (*Apiocrinites Rotundus*), from the Bradford Clay, of which formation it is so characteristic a species.

To enable these numerous additions to be placed in their relative order of super-position, the entire Geological collection has been re-arranged; and it is confidently hoped that the great end and aim of such collections (that of imparting scientific knowledge practically) will, in this department at least, be answered, and appreciated by those who may seek its aid.

To the Library also, two or three accessions demand especial notice. The Transactions of the American Philosophical Society at Philadelphia have been presented by that body as a gratifying mark of the friendly feeling which exists between Societies widely separated, but having one common object to accomplish—that of the diffusion and promotion of literature and science. To the Geological Society of London we are indebted for the liberal offer of presenting their Quarterly Geological Journal; and to the munificence of Miss Benett, for the Transactions of the Geological Society of London, from the commencement to the year 1837,

which is a work of great importance in an Institution like our own, as a record of the discoveries in that science.

On former occasions it has been the gratifying task of the Council to allude to the great interest evinced to view the contents of the Museum, by the operative portion of the community especially. This continues to increase; on the last Easter Monday and Tuesday, 1,700 persons were admitted. During the past year the visiter's book gives the number of registered names as 9,471, which does not include all, as the word "party" is frequently used without expressing the actual number. Now when it is considered that so large a proportion of our townspeople are thus annually admitted gratuitously, it is sufficient proof of the value of such an Institution, and the claims it has upon the town at large for support; for it is not too much to hope, that in addition to the mere visual gratification that all derive, some of a more ennobling and lasting nature will be imbibed by others, which may, eventually, ripen into a rich harvest of intellectual enjoyment, and supply a fund of information which can be drawn upon at a future period; for, as Sir John Herschell has well remarked, "It is not one of the least advantages of these pursuits, that they are altogether independent of external circumstances, and may be enjoyed in every situation in which a man can be placed in life."

LEEDS PHILOSOPHICAL AND LITERARY SOCIETY.

PROPRIETARY ACCOUNT.

Balance due to the Treasurer	£.	s.	d.
	257	9	4

ORDINARY ACCOUNT.

Disbursements.		£.	s.	d.
To Balance due to the Treasurer at the close of last Session		26	9	11
Sub-Curator's Salary and Expenses		120	0	0
Insurance		8	8	4
Tradesmen's Bills		60	9	3
Books and Stationery		14	1	0
Printing and Advertising		11	16	0
Taxes		2	10	9
Coal Gas		10	19	9
Coal, Coke, &c.		12	14	2
Purchase and Carriage of Specimens, and Preparation of do.		3	3	9
Sundry Expenses, Cleaning, Postage, &c.		25	3	11
Mr. C. Kemble, for Five Readings from Shakspeare		105	0	0
Dr. Wolff, for Three Lectures		18	0	0
Mr. Addams, for Six Lectures		26	5	0
Trustees of Music Hall, &c., for Mr. Kemble's Lectures	£16	9	0	
Sundry Expenses for Do., Attendance, &c.	5	5	8	
<hr/>				
Janitor		21	14	8
Alterations and Additions in the Sub-Curator's Residence..		26	10	0
Rev. Dr. Scoresby, for One Lecture on Telescopes		93	11	0
Interest to Banker		5	0	0
		6	5	0
		<hr/>		
		£598	2	6

Receipts.		£.	s.	d.
By Subscriptions of 84 Members		176	8	0
" 47 Subscribers		49	7	0
Subscriptions and Deposits of 2 New Members		10	10	0
" 6 New Subscribers		6	6	0
Arrears of Subscriptions for last Year		29	8	0
Mr. Kemble's Lectures		103	18	0
Dr. Wolff's Lectures		18	9	0
Mr. Addams's Lectures		2	8	0
16 Admissions to the Museum, at 6d. each		0	8	0
Donations towards liquidating the Debt due to the Treasurer, &c.		29	2	0
Guarantee Fund towards Mr. Kemble's Lectures		20	0	0
West Riding Geological and Polytechnic Society		15	0	0
Mr. Buck, for use of the Lecture Room		6	6	0
Balance due to Treasurer		130	12	6
		£596	2	6

ACCOUNTS UNRECEIVED.		£.	s.	d.
West Riding Geological and Polytechnic Society, for Rent		52	10	0
Subscriptions		43	17	0
		£96	7	0

ACCOUNTS UNRECEIVED.

West Riding Geological and Polytechnic Society, for Rent	52 10 0
Subscriptions.....	43 17 0
	£96 7 0

DONATIONS AND ADDITIONS

TO THE SOCIETY'S MUSEUM.

Those Marked thus () are Honorary Members; thus (†) are Members of this Society.*

MINERALOGY AND GEOLOGY.

- | | | |
|--|---|---|
| <p>Two Echini, an Ostrea, and Two Molar
Teeth of the Horse, from the Pliocene
Formation of the Island of Malta;
Ribs, and portions of Vertebra and
Teeth of the Ichthyosaurus; fine
Specimens of Avicula longicostata
Ceratodus, and Plagiostoma gigantea
from the Lias of Bristol; Specimens
of Producta hemispherica and Mad-
repores, from the Carboniferous Lime-
stone; Lima proboscidea and Pho-
ladomya, from the Inferior Oolite,
Bristol</p> | } | † Thomas Pease, Esq. |
| <p>An interesting series of Specimens,
illustrating the Structure of the Pear,
or Bradford Encrinite, (Apiocrinites
Rotundus) from Bradford, Wilts.....</p> | } | † Robt. Arthington, Esq. |
| <p>Five Specimens of Opalized Wood, from
the Island of Antigua, West Indies...</p> | } | Mr. A. Blackburn, 59th
Regiment. |
| <p>45 Fossils from the Lias, Marlstone,
Chalk, and Kelloway Rock, of Scarbro'</p> | } | Rev. J. Holroyd. |
| <p>A portion of the Geological Collection
of the late Miss Bennett, of Norton
House, Wilts, consisting of about
3,000 Specimens, illustrating the
Chalk, Chalk Marl, Upper Green
Sand, and Portland Oolite of Wilt-
shire; Lower Green Sand of Farring-
don; London Clay of Hordwell Cliff
and the Isle of Wight; Hastings Sand
of Tilgate Forest; Forest Marble;
Oxford Clay of Weymouth; Moun-
tain Limestone of Frome; Lias of
Lyme Regis, &c.</p> | } | <p>Purchased for the sum of
£103, and presented by
† W. Beckett, Esq., M.P.,
† Chrstr. Beckett, Esq.,
† John Blayds, Esq., † J.
G. Marshall, Esq., † H. C.
Marshall, Esq., † Jno. Gott,
Esq., † Wm. Gott, Esq.,
† Wm. Aldam, Esq., M.P.,
† Jas. Brown, Esq., † Ar-
thur Marshall, Esq., and
† Hamer Stansfeld, Esq.</p> |

ZOOLOGY.

- 25 highly interesting Invertebrate Animals from the Bay of Messina, including a fine Specimen of the Argonauta Argo, with the Animal Ova, &c., in spirits, also Two of the Shells; Carinaria Mediterranea, Cymbulia Peronii, Sigaretus Perspicieus, Pleurobranchus Macklii, Bullæa Aperta, Berthella Porosa, Ariocella, Aplysia, Cleodora Lanceolata and Cuspidata, Criseus Spiniformis, Soleyma Mediterranea, Umbrella Mediterranea, &c. }
- * Andrew Melly, Esq.,
Liverpool.
- A species of Spatangus from the Black Sea..... } † Thomas Pease, Esq.
- Specimens of Doris bilamellata } Mr. Tuffin West.
- Pair of the Natter-Jack (Bufo Calamita) } † Mr. Teale, F.L.S.,
(Curator.)
- Fine Specimen of Sphœria Robertsii } Jas. Wilkinson, Esq., Lon-
or Bullrush Caterpillar, from the Bay } don, by † Wm. Beckett,
of Islands } Esq., M.P.
- Stuffed Specimens of the Stint, Razor }
Bill, Ring Plover, Common Tern, } Dr. Irvine.
Snow Bunting, and Common Gull... }
- Fine Specimen of the Musk Rat or }
Musquash, from Canada } Mr. Wm. Browne.
- Two Specimens of Chiton, and a species } Rev. F. O. Morris, Nafferton
of Antipathes } Vicarage, near Driffield.

MISCELLANEOUS.

- Specimens of Roman Pottery from }
York; Bayonet, Brass Eagle, Three } † Thomas Pease, Esq.
Musket Balls, and Two Buttons from }
Waterloo }
- An Indian Pipe and Three Flint Arrow }
Heads, found in a Mound, in Chicot } Mr. Lambe.
County, United States..... }
- Fish Hook from the South Seas; Spe- }
cimen of Native Cloth; Pincushion }
from Canada; Specimen of Teak from }
the Royal George, sunk at Spithead; }
Two Foreign Passports, &c. }
- Rev. F. O. Morris, Naffer-
ton Vicarage.

LIBRARY.

Proceedings of the Geological Society of London, for 1844	} The Geological Society of London.
Proceedings of the Zoological Society of London, for 1844	} The Zoological Society of London.
Monographie des Poissons Fossiles du Système Dèvonien, (Old Red Sandstone,) par Louis Agassiz, M.D., &c. }	J. G. Marshall, Esq., (Curator.)
Report on the State of the Dublin University Museum..... }	The Dublin University.
The Transactions of the Geological Society of London, from the commencement to 1837, 4to.	} Miss Benett, Norton House, Wilts.
The Anniversary Addresses of Dr. Buckland, G. B. Greenhough, Dr. Fitton, Rev. A. Sedgwick, Sir R. I. Murchison, and a Catalogue of Wiltshire Fossils, by Miss E. Benett..... }	
Transactions of the American Philosophical Society, vol. ix., part 2, 4to. }	The American Philosophical Society.
Proceedings of the Academy of Natural Sciences of Philadelphia, for 1845... }	The Academy of Sciences, Philadelphia.
Sixteenth Report of the Scarbro' Philosophical Society, for 1845	} The Scarbro' Philosophical Society.
The Quarterly Journal of the Geological Society, Nos. 5 and 6, 8vo..... }	The Geological Society of London.
Boerhaave's Index Plantarum, 4to., 1720 }	} Mr. Frank Perfect.
Wilson's Synopsis of British Plants, 8vo., 1744	
" On the General, as distinguished from the Professional Advantages of a Classical Education;" a Paper read before the Leeds Philosophical and Literary Society	} Rev. C. Weidemann, (the Author.)
Report of the Natural History Society of Northumberland, Durham, and Newcastle-on-Tyne, 1845	} The Natural History Society of Ditto.

LIST OF OFFICERS, COUNCIL, AND MEMBERS.

OFFICERS.

President.....	{ Rev. William Sinclair, A.M.
Vice-Presidents	{ Rev. Joseph Holmes, D.D. John Hope Shaw.
Treasurer	{ William Williams Brown.
Secretaries	{ William Sykes Ward. George Shaw.
Curator in Geology	{ J. G. Marshall, F.G.S.
„ in Zoology	{ T. P. Teale, F.L.S.
„ in Antiquities and Works of Art, &c. {	Thomas Nunneley.
Sub-Curator	{ Henry Denny, A.L.S.

COUNCIL.

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Joshua Ingham Ikin.	Arthur Lupton, Jun.

PROPRIETARY MEMBERS.

Robert Arthington.	Henry Chorley.
Edward Baines.	Abraham Clapham, <i>Potternewton.</i>
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Christopher Beckett.	* Robert Derham.
William Beckett.	Thomas Townend Dibb.
Alfred Birchall.	* Thomas Park Dickinson.
Edwin Birchall.	Edwin Eddison.
John Blayds, (2 shares.)	Robert John Ellershaw.
Thomas Blayds.	John Ellershaw, Jun.
Richard Bramley.	Rev. John Ely.
* James Brown.	Samuel Greame Fenton, <i>Belfast.</i>
William Williams Brown.	Robert Lawson Ford.
John Burton.	William Gatliff.
Newman Cash.	Thomas Wellington George.
* John Cawood.	George Goodman.

* Members deceased, whose Shares have not been transferred.

John Goodman.

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William Gott.

* William Hey.

James Holdforth.

Joseph Holdsworth, *Wakefield*.

John Jowitt.

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Charles Makins.

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William Smith.

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* J. Williamson, M.D., *Stretton Hall*,
Chester.

Richard Basset Wilson.

Robert Horatio Wood.

* Members deceased, whose Shares have not been transferred.

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 Duncan Sidey.
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Thomas Stansfeld.
Joseph Teale.
Joseph Thackray.
Thomas Walsh.

John Wilkinson.
Henry Williamson.
John Wilson.
Philip Wolff.

HONORARY MEMBERS.

Louis Agassiz, M.D., Professor of Comparative Anatomy, &c., *Neufchatel*.

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Samuel Bailey, Esq., *Sheffield*.

Sir David Brewster, D.C.L., F.R.S., &c., *Edinburgh*.

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Thomas Campbell, *London*.

William Carey, *London*.

Henry Denny, A.L.S., Corresponding Member of the Academy of Natural Sciences of Philadelphia, of the Syro-Egyptian Society of London, Honorary Member of the Yorkshire Philosophical Society, and of the Norfolk and Norwich Museum, *Leeds*.

J. Drake, M.D., *Cincinnati*.

William Hey Dykes, F.G.S., Honorary Member of the Yorkshire Philosophical Society, *Wakefield*.

John Field, *Low Moor*.

The Rt. Hon. Earl Fitzwilliam, F.R.S., &c., *Wentworth House*.

George Goldie, M.D., *York*.

Robert E. Grant, M.D., F.R.S.L., and E., and F.L.S., G.S., Z.S., W.S., &c., &c., Professor of Comparative Anatomy and Zoology in the University of London, *London*.

Robert Hall, A.M., Barrister at Law, *London*.

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Robert Leyland, *Halifax*.

William M. Maude, *Knostrop*.

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TWENTY-SEVENTH REPORT

OF



THE COUNCIL

OF THE

LEEDS

PHILOSOPHICAL AND LITERARY

SOCIETY,

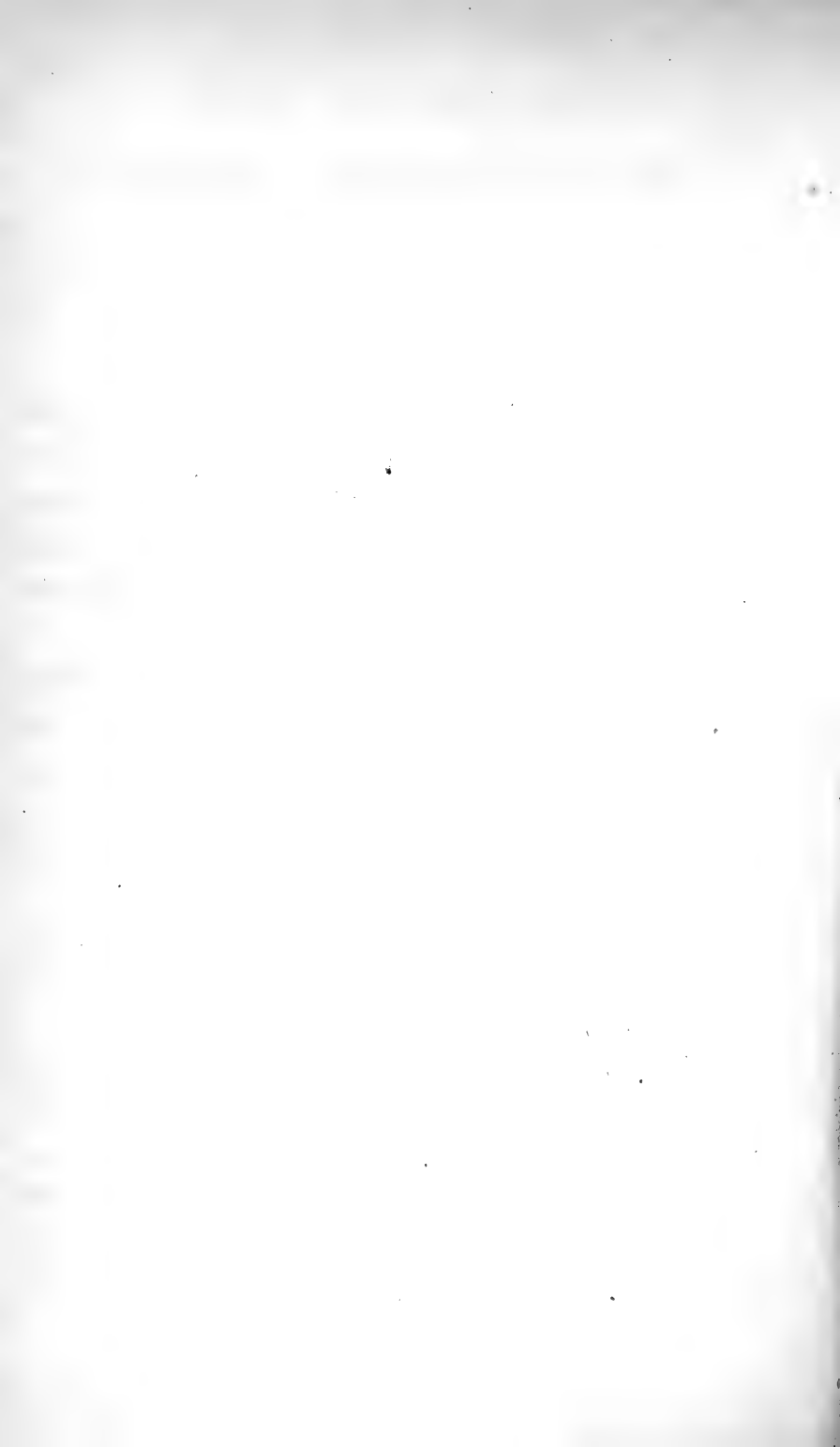
AT THE CLOSE OF THE SESSION,

1846-47.

LEEDS:

PRINTED BY JOHN HEATON, STATIONER, 7, BRIGGATE.

M. DCCC, XLVII.



REPORT OF THE COUNCIL

AT THE CLOSE OF THE

TWENTY-SEVENTH SESSION.

The Council of "THE LEEDS PHILOSOPHICAL AND LITERARY SOCIETY," in presenting, at the close of the Twenty-seventh Session, a Report of the Transactions during the past year, are enabled, with much satisfaction, to state, that the proceedings have not been exceeded in interest and variety by those of any former Session.

The Papers read before the Society have been of a very high order, some of them being contributed by Gentlemen residing at a distance from Leeds, to whom the Council beg again to offer the thanks of the Society.

The following are the Titles of the Papers, and the dates when read:—

1. "On the Origin of Alphabetical Writing and Printing,"—by the Rev. W. Sinclair, M.A. *President*—(Read Oct. 16th, 1846.)
2. "Some Account of the following Papers, which had been read at Southampton—'On Fauvelle's Method of Boring for Artesian Wells,'—'The Artesian Well on Southampton Common,'—'The Experiments for the Construction of the Tubular Bridge over the Menai Straits,'—'The Effect of Water and Lead Pipes,'—'On the Actinograph and Growth of Plants,'—'On the Corrosion of Iron Rails,'—and 'On Professor Grove's Experiments on the Decomposition of Water,'"—by Mr. W. S. Ward—(Read Nov. 6th, 1846.)

3. "On the true grounds of distinction between the Animal and Vegetable Kingdoms, and their near approximation in particular instances,"—by Dr. Heaton—(Read Nov. 20th, 1846.)
4. "On some of the most interesting Facts in Practical Astronomy,"—by Mr. Martyn J. Roberts, F.R.S.E.—(Read Dec. 4th, 1846.)
5. *Conversazione*—(Dec. 18th, 1846.)
6. "On Church Music,"—by the Rev. John Carter, D.D. of Wakefield—(Read Jan. 15th, 1847.)
7. "On Crime, its Sources, Prevention, and Punishment,"—by W. St. James Wheelhouse, Esq. Barrister-at-Law—(Read Feb. 5th, 1847.)
8. "On the History of the Middle Classes of Society,"—by Mr. T. C. Brian—(Read Feb. 19th, 1847.)
9. "On Self-Culture,"—by the Rev. C. Weidemann, M.A. of Huddersfield—(Read March 5th, 1847.)
10. "On the Manners and Customs of the Hindoos,"—by the Rev. Foster Rogers, M.A.—(Read March 19th, 1847.)
11. "On the Character and Writings of Dean Swift,"—by the Rev. Arthur Lupton, of Whitby—(Read April 9th, 1847.)
12. "On the *Ars Mantica*, or Divine Magic of the Ancients,"—by Mr. R. Church—(Read April 23rd, 1847.)

Two Courses of Lectures were delivered during the past Session. The first being that of Mr. COWDEN CLARKE, "On the Poets of the Guelphic Era," which were very interesting, and well attended. In justice to this gentleman it must be remarked that his graphic, able, and impartial analysis of the character and writings of the various authors of the period, evinced a thorough knowledge of his subject, and delighted his audience.

The other Course of Lectures "On the Progress of secular Music at home and abroad in the Seventeenth and Eighteenth centuries," was delivered by Sir H. R. BISHOP, in the Saloon of the Music-Hall, which was engaged by the Council for the occasion, the Hall of the Society having been found, as was anticipated from the celebrity of the Lecturer, and the popularity of the Course, inadequate for the accommodation of the audience. These Lectures were most effectively illustrated by an excellent Choir, including several Vocalists of high provincial reputation.

The most prominent and novel feature of the past Session, was the holding a *Conversazione* in the entire suite of rooms of the Society, which were brilliantly lighted and decorated.

In following the suggestion expressed in the Report of the preceding Session, that a Public Soirée should be held, the Council experienced many difficulties, arising from the novelty of the attempt; and not being fully confident of success, determined to bear a considerable part of the expenditure, to which they did not then feel themselves justified in applying the funds of the Society.

Invitations were issued by the President and Council, for the evening of the 18th December,—the attendance was brilliant and numerous,—many, on this occasion, saw the treasures of the Society's Museum for the first time,—and the effect produced, it may fairly be inferred, has been to bring the claims of this Society prominently and favour-

ably before the Public. In fact, the success of the *Conversazione*, greatly exceeded the most sanguine expectations of its promoters.

Without detailing the proceedings of the evening, the Council feel bound to express their thanks to the Electric Telegraph Company, for the loan of a pair of their instruments, and to Dr. WRIGHT of Wakefield, for his kindness in explaining the working of the Telegraph.

The great success of this first attempt, and the abundant materials, both as regards scientific experiments, and objects of interest, of which the Council were not fully able to avail themselves, encourage them unhesitatingly to recommend to their successors to hold at least one similar Réunion during the ensuing Session.

The Council not doubting that their arrangements in this respect will be confirmed by their successors, have pleasure in announcing, that a Course of Four Lectures on the Revelations of the Microscope, will be delivered by Dr. CARPENTER, F.R.S. in the early part of the ensuing Session.

The Council have to record the accession of seven new Members, and eighteen Subscribers; but regret the loss of eight Ordinary Members, and three Subscribers.

The Council much regret that they cannot report more favourably on the Finances of the Society, as a large sum is yet due on the Proprietary Account, and a considerable balance is also due to the Treasurer on the Ordinary Account, of the Society. It will, however, appear, on a

close investigation, that the Disbursements of the past Session have not materially exceeded its Income, notwithstanding the large sum of £121 17s. 6d. paid for Lectures, and the occurrence of other extraordinary sources of expenditure.

The progress of the Museum has been steady and satisfactory, and when it is borne in mind that not a single draught has been made upon the Society's funds for the *purchase* of Specimens, this will partially explain why the numerical amount of accessions may appear less than on some former Sessions. Amongst the Donations there are some which demand the especial recognition of the Council. The Geological and Zoological Specimens from Egypt, &c. by our townsman Mr. PEASE, affords a pleasing instance of a zeal for the welfare of the Society, while sojourning in distant lands: which they would be glad to see imitated by other Members, even during only short visits to our native coasts, from whence numberless objects of interest might be transmitted. To Mr. BOYNE also, for several relics from the Tombs of Ancient Egypt, and Roman Coins, the collection is indebted; as well as for his services in superintending the arrangement of the Coins in the Society's possession, which were not previously exhibited.

The Palæontological department has been enriched by a beautiful Cast from the unique and singularly perfect skeleton of *Plesiosaurus Hawkinsii* in the British Museum, through the liberality of C. G. MACLEA, Esq. during his Mayoralty; and the Council venture to express the hope,

that his successors in that office will evince, in like manner, their willingness to increase the stores of an Institution, which is open for the gratification and intellectual improvement of the inhabitants of the Borough over whom they are called to preside.

The preeminently interesting and valuable Donation made to the Society during the Session, is that of a beautiful Marble Bust of the late JOHN MARSHALL, Esq. (by Macdonald of Rome), presented by his Sons—WILLIAM, JAMES GARTH, HENRY COWPER, and ARTHUR MARSHALL, Esquires—as a memorial of his long-continued interest in the welfare of a Society of which he was one of the principal founders, firmest supporters, and the first President; which office he held for five successive years. The Council feel gratified that the wish expressed in the last Report of the Society, to possess Busts of its most prominent Founders, has been thus far realized; and hope that *this* may form the nucleus for others, not only of its Founders, but also of Eminent Individuals to whom Yorkshire has given birth, or who, from their public services or scientific acquirements, may claim the gratitude of the county.

Through the liberality of some of our Members, whose names are appended, a splendid Pair of one of our rarest British Birds, the Black Throated Diver, together with its Egg and Young, and a Male of the Northern Diver, have been secured, to fill up an important hiatus in the Ornithological series.

The Society are again indebted to Miss BENETT, of

Norton-House, Wilts, for a valuable Donation of Fossils, illustrative of the Norfolk and Suffolk Crag, and Casts of the Horn and Teeth of the Iguanodon.

From Mr. CULLINGWORTH has been received an interesting series of Articles of Dress, Implements of War, &c. from New Zealand, collected himself in that Colony in 1843-4. The value of such relics, in an historical point of view, and their fitness for deposit in a Museum, is becoming daily more evident,—illustrating, as they do, the manners and customs of a people who are fast disappearing before the advances of civilization, and whose moral and social condition have undergone so great a change during the last fifty years, that their *Native* weapons have, to a considerable extent, been laid aside, as well as their manufactures discontinued for those of *European* construction: hence, when a few generations shall have passed away, *they*, and their various articles of savage life, will become the subjects of *tradition*; the land which gave them birth will know them no longer; and, unlike the inhabitants of Ancient Egypt, Mexico, or Hindostan, whose paintings and sculptures have handed down their deeds to posterity, these will leave no memorial of their existence, save such trophies as may have found lodgment in the Museums of Public Institutions; and they will then become the only oracles, to guide the pen of future historians, when describing the once warlike or domestic habits of the aboriginal inhabitants of our Colonial possessions. Viewing, therefore, such native productions in an Ethnological point of

view, the Council would be glad to see the Museum become the depository of similar articles from other distant lands.

The Library continues to receive the Reports of various Metropolitan and Provincial Societies, as well as those of our Transatlantic brethren; and the Council are proud to acknowledge the receipt of a Copy of the *Magnetical and Meteorological Observations at Toronto in Canada*, presented by order of the British Government. The gift of our townsman, Mr. T. W. LEATHER, Civil-Engineer, of Three elegant Views of Bridges erected by himself in Leeds and its Neighbourhood, framed and glazed, as also his Report on the Sewerage of Leeds, &c. deserves the special thanks of the Society; and it would afford the Council much satisfaction to have to report a more rapid extension of this particular department, from Donations of Books, &c. as also to see its usefulness more extended and appreciated.

In drawing a slight summary of the principal Donations made to the Museum during the past year, the Council enter upon this part of their duty with double pleasure, not only in acknowledgment of the public spirit of the Members in thus enriching the Collection with Specimens of great interest, which could not be otherwise obtained, but as a proof of the desire evinced, on their part also, to provide for the growing taste, and eager thirst of the population for the acquisition of knowledge,—a knowledge too, it must be allowed, however slight it may be, of the most sublime and ennobling description. For

to enable them—by visiting gratuitously their Museum, to contemplate at a glance the majestic and omnipotent works of the Great Architect of the universe, in periods the most remote, as revealed by the general wreck of matter, exhumed from the vast charnel-house of Nature, by the labours of the Geologist or the Miner, or of the varied forms of animated beings who now tenant this planet, nay, the very materials of which this globe is composed—cannot fail to produce on the minds of the most untutored observers a correspondent degree of elevation of thought and purity of sentiment, and, by leading them to form juster conceptions of their own relation to that Being to whom they owe every thing, become wiser and better members of the community.

LEADS PHILOSOPHICAL AND LITERARY SOCIETY.

PROPRIETARY ACCOUNT.

Balance due to the Treasurer	£.	s.	d.
271	16	4	

ORDINARY ACCOUNT:

Disbursements.		£.	s.	d.
To Balance due to the Treasurer at the close of last Session	130	12	6	
Sub-Curator's Salary and Expenses	120	0	0	
Insurance	8	8	4	
Tradesmen's Bills	37	19	6	
Books and Stationery	15	2	6	
Printing and Advertising	25	5	0	
Taxes	3	0	9	
Gas	16	19	0	
Coal, Coke, &c.	13	0	0	
Carriage and Preparation of Specimens	2	5	4	
Sundry Expenses, Cleaning, Postage, &c.	21	16	6	
Sir H. R. Bishop for Four Lectures	42	0	0	
Trustees of Music-Hall, &c. for Sir H. R. Bishop's Lectures	13	10	6	
Vocal Illustrations for Ditto	45	7	0	
Mr. C. Cowden Clarke for Four Lectures	21	0	0	
Janitor	26	0	0	
Interest to Banker	7	4	0	
				£549 10 11

Receipts.		£.	s.	d.
By Subscriptions of 85 Members	178	10	0	
41 Subscribers	43	1	0	
and Deposits of 4 New Members	21	0	0	
18 New Subscribers	18	18	0	
Arrears of Subscriptions for last Year	30	9	0	
Sir H. R. Bishop's Lectures	46	0	0	
Mr. C. Cowden Clarke's Lectures	2	0	0	
Admissions to the Museum	0	7	0	
Donations towards liquidating the Debt due to the Treasurer	10	0	0	
West-Riding Geological and Polytechnic Society for Two and a Half Years' Rent	75	0	0	
Rent of Cellars under the Hall, One Year	15	0	0	
Rent of Lecture-Room	8	8	0	
Balance due to the Treasurer	100	17	11	
				£549 10 11

DONATIONS AND ADDITIONS

TO THE

SOCIETY'S MUSEUM.

*Those marked thus (*) are Honorary Members; thus (+) Members of this Society.*

MINERALOGY AND GEOLOGY.

- | | | |
|--|---|--|
| Specimen of <i>Lepidodendron</i> from Potternorton | } | + A. Clapham, Esq. |
| Specimen of Anglesea Marble | } | Edwin Armistead, Esq. |
| Sixteen Fossils from the Inferior Oolite of Bristol; Sixteen from the Transition Limestone of Ireland; Quartz, coloured by Chromate of Iron; Crystals of Quartz, Strontian, Cotham Marble from Bristol... | } | The Misses Carpenter, Bristol. |
| Curious Nodular Mass of Septarium, Specimens of <i>Ammonites Calloviensis</i> , <i>Modiola cuneata</i> , <i>Amphidesma recurvum</i> , <i>Belemnites sulcatus</i> ; <i>Vertebrae</i> of the <i>Ichthyosaurus</i> , and Molar Teeth of the Elephant, from Sleaford in Lincolnshire | } | — Green, Esq. Leeds. |
| Two <i>Vertebrae</i> of the <i>Ichthyosaurus</i> , from the Alum Shale of Lofthouse, near Redcar, and Specimens of <i>Calamites Canadensis</i> , from Burley | } | + Sparke George, Esq. |
| Fine Cast of <i>Plesiosaurus Hawkinsii</i> , from the Unique Specimen in the British Museum, discovered at Street, near Glastonbury | } | + C. G. Maclea, Esq. (Mayor of Leeds.) |
| Several Varieties of Carbonate of Lime from Derbyshire | } | Mr. Reynard. |
| Skull of the Red Deer, found ten feet below the surface at Crown-Point, in digging for the New Docks | } | Mrs. J. Chadwick. |

Several Specimens of Saurian Vertebrae, Ammonites, Belemnites, Nuculae, from the Lias of Boulby, near Whitby; Crystals of Muriate and Sulphate of Ammonia, Sulphate of Lime; Specimens of Alum in its native, calcined, and crystallized state } Geo. Westgarth, Esq. Boulby—
by Mr. J. Rothery.

Two fine Slabs of Carboniferous Sandstone, with Impressions of a Species of *Annelida*, from Ribblesden, Holmfirth } Mr. J. Dyson, Holmfirth.

Specimens of Nummulitic, Limestone, and Red Jasper, from Egypt } † Wm. Boyne, Esq.

Fossils, Shells, from the Valley of the Tombs of the Kings at Thebes; Red Jasper, from the Summit of the Sandstone Rock on which is the Temple of Ipsamboul; Specimens of Nummulites from the Mokattan Hills, near Cairo..... } † Thos. Pease, Esq.

Fifty fossils from the Norfolk and Suffolk Crag, Casts of the Teeth and Nasal Horn of the *Iguanodon*, Ditto of *Copriolites* from Lyme-Regis, Bones from Tilgate Forest, and the Isle of Wight, Specimens of Sandstone from Ditto, Fossil *Zamia* from Portland, Recent Specimen of Ditto, Saurian Vertebrae from Weymouth, Shells from the Blue Lias of Bath, &c. } Miss Benett, Norton-House, Wilts.

ZOOLOGY.

A Collection of Zoological Specimens from Egypt, viz:—Specimen of Bat from the Pyramid of Cheops; Skeleton and Skin of the Lybian *Varanus* (*Psammosaurus Griseus*), from Cairo; Prickly *Uromastix* (*Stellio Spinipes*), from the Desert, near Cairo; Pair of *Proteus Anguinus*, from the Grotto at Adelsberg; 4 Specimens of the Skunk (*Scincus Officinalis*); Three Lizards; Four Snakes; Toad (*Bufo Bombinans*); Globe *Tetraodon* (*Tetraodon Stellatus*); Striped *Tetraodon* (*Tetraodon Lineatus*), from the Nile; Black Bellied Darter (*Plotus Melanogaster*); Widdow Bunting (*Vidua Paradisaea*); and several Insects from Egypt } † Thos. Pease, Esq.

Specimen of the *Convolvulus Hawkmoth* (*Sphinx Convolvuli*) } Miss Wilkinson, Roundhay.

- Skin of the Koodo (*Tragelaphus Strepsiceros*), from South Africa } Rev. Wm. Elliot, Missionary, South Africa—by † Edward Baines, Junr. Esq.
- A fine Specimen of the King Crab (*Limulus Polyphemus*); several Insects and a Snake, from North America } † A. Clapham, Esq.
- Beautiful Stuffed Specimens of the Male, Female, Young, and Egg, of the Black Throated Diver (*Colymbus Arcticus*), and a fine Male of the Northern Diver (*Colymbus Glacialis*)..... } Purchased and presented by the following Members of the Society:—John Cudworth, Edwin Eddison, Jos. Bateson, Peter Fairbairn, Wm. Watson, Jun. G. W. and T. Bischoff, George Shaw, and Newman Cash, Esquires.
- Specimens of *Cyclostoma* from Marseilles... } † Wm. Boyne, Esq.
- Eight Species of Birds from Australia, Pair of the Nankeen Heron, Crested Parrot, Goatsucker, Break of Day Bird, Wirey Feathered Creeper, Colonial Nightingale, Ruddy Duck } Saml. Hey, Esq.
- A Collection of British and Madeira Plants } Dr. Halley.
- Specimen of the Black Toed Gull (*Lestris Richardsonii*), shot on the Norfolk Coast, Oct. 1846 } H. J. Hare, Esq. Bramhope-Hall—by † Dr. Chadwick.
- Specimen of the Little Auk (*Alca Alle*), shot near Swillington, Oct. 1844 } Benjamin Clarke, Esq. Skelton-Grange.
- Specimen of the Puffin (*Alca Arctica*) } † Sparke George, Esq.

MISCELLANEOUS.

- Two Mummies of the Crocodile, and a Foot of Ditto, from Manfaloot; 11 Porcelain Figures of Osiris, &c. from the Tombs at Thebes; Roll of Papyrus from Ditto; Cinerary Urn from Alexandria; Garment from the Body of a Mummy; Fragment from the Great Temple at Denderah; Leaf and Fruit of the Doom Palm; several Roman Coins, and Casts in Sulphur, from scarce Coins in the British and Paris Museums } † Wm. Boyne, Esq.
- Stone Celt, and Ancient Key, found in the Ruins of St. Mary's Abbey, York..... } Mr. Thorston.

- Shilling of James First } Mr. Wm. Jarritt.
- Marble Bust of the late John Marshall, Esq.
by Macdonald of Rome } Presented by his Sons—William, † James Garth, † Henry Cowper, and † Arthur Marshall, Esquires.
- Cast from a Piece of Ancient Sculpture in
the Tower of Ilkley Church } Thos. Wilson, Esq.
- Portion of the Stem of the Tree Fern from
Chusan } Joseph Dickinson, Esq.
- Cloak made of the New Zealand Flax, from
New Zealand; large Stone Ball, supposed
to have been fired during the Siege of
Leeds by Cromwell, found in digging the
New Docks } Mrs. J. Chadwick.
- A Collection of Dresses, Implements of
War, Native Productions, &c. from New
Zealand:—Kiboku, a Model War Canoe;
Koroti, a War Club made of Flint Stone;
Curiously Carved Box and Lid; Specimens
of New Zealand Flax, in various
Stages of Preparation by the Natives;
Ear Drops, worn by the New Zealanders
—various Specimens, including one of
Poenamu, from which the middle Island
takes its name, and highly prized by the
Natives; Fish Hook; Plated Flax Bands,
used in carrying Burdens; Kituku Mat,
a beautiful Specimen of the Manufacture
of the Flax by the Natives, worn by the
Wives of the Ranghitera or Chiefs;
Mantle or Mat, prepared from Flax,
worn by the Ranghiteras; Two Mantles,
worn by the Natives; Patu Patie, a
War Club, beautifully carved; Piakie, a
curious Instrument of War, used only
in New Zealand; Spear, a beautiful
Specimen of the New Zealand Spear,
ornamented with the Feather of the
Ku Ku, and Dog's Hair; a smaller Specimen
of the Spear; Tipae, a Representation
of the Evil Spirit, with moveable
Arms; Cape worn by the New Zealanders
whilst fishing in cold weather; Calabash,
used as a Pitcher and Drinking Utensil;
Two Carved Walking Sticks; Punt, or
Native Tinder; Two Specimens of the
Teeth of the Sperm Whale; Tusk of the
New Zealand Wild Boar

Mr. J. Cullingworth, Leeds.

LIBRARY.

- Reports of the Zoological Society of London, Nos. 148 to 158; and Report of Council } The Zoological Society of London.
- Proceedings of the West-Riding Geological and Polytechnic Society at the 17th, 18th, 19th, 20th, 21st, 22nd, 23rd, and 24th Meetings } The West-Riding Geological and Polytechnic Society.
- Observations made at the Magnetical and Meteorological Observatory, at Toronto in Canada, in 1840, 1841, & 1842, 4to... } Presented by Direction of the British Government.
- Annual Reports of the Yorkshire Philosophical Society, for 1843, 1845, & 1846... } The Yorkshire Philosophical Society.
- Report of the Liverpool Royal Institution... } The Liverpool Royal Institution.
- Transactions of the Manchester Philosophical Society, vol. vii. pt. 2 } The Manchester Philosophical Society.
- Report on the Sewerage of Leeds; Plans, and Sections to Ditto, by J. W. Leather, Civil Engineer } † Presented by the Author.
- Transactions of the American Philosophical Society, vol. ix. pt. 3, 4to.; Proceedings of Ditto, Nos. 34 & 35..... } The American Philosophical Society, Philadelphia.
- Three Views—the Cast Iron Aqueduct at Stanley Ferry, and the Victoria and Crown Point Bridges, Leeds (framed and glazed), designed and erected by Messrs. Leather and Son } † T. W. Leather, Esq.
- Several Engravings of Organic Remains ... } Miss Benett, Norton-House.
- An Address, delivered at the Southampton Meeting of the British Association for the advancement of Science, Sept. 6th, 1846, by Sir R. J. Murchison, G. C. St. S. &c. President..... } Sir R. J. Murchison.

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TWENTY-EIGHTH REPORT

OF

THE COUNCIL

OF THE

LEEDS

PHILOSOPHICAL & LITERARY
SOCIETY,

AT THE CLOSE OF THE SESSION,

1847-48.

LEEDS:

PRINTED BY EDWARD BAINES AND SONS.

MDCCCXLVIII.





REPORT OF THE COUNCIL,

AT THE CLOSE OF THE

TWENTY-EIGHTH SESSION.

THE close of the Twenty-eighth Session renders it the duty of the retiring Council again to present to the Society a Report of its Proceedings, which, in some respects, afford subject for congratulation.

The Papers read at the Ordinary Meetings of the Society have contributed materially to the general interest of the Session, embracing a great variety of subjects, as will appear from the subjoined list:—

1. "On the Contests between the English and French for Supremacy in India"—by the Rev. William Sinclair, M.A., *President*—(Read Oct. 15th, 1847.)
2. "On the Comparison between the principal Modern Languages of Europe"—by William West, Esq., F.R.S.—(Read Nov. 5th, 1847.)
3. *Conversazione.*
4. "On the Origin and Constitution of Grand Juries in England, and their Effect on the due Administration of Justice in the Criminal Courts"—by William Blanshard, Esq., Barrister-at-Law—(Read Dec. 3rd, 1847.)
5. "On Capital Punishments"—by John Hope Shaw, Esq., *Vice-President*—(Read Dec. 17th, 1847.)
6. "On the Round Towers of Ireland"—by the Rev. R. R. Wolfe—(Read Jan. 7th, 1848.)

7. "On the Labours of John Hunter and Cuvier compared"—by Mr. J. Ingham Ikin—(Read Jan. 21st, 1848.)
8. "On the Institutions and Spirit of Chivalry, from its Rise to its Extinction"—by Wm. St. James Wheelhouse, Esq., Barrister-at-Law—(Read Feb. 4th, 1848.)
9. "On the Philosophy and Expression of the Intellectual Emotions"—by the Rev. Dr. Hamilton—(Read Feb. 18th, 1848.)
10. Ditto Ditto (Read March 3rd, 1848.)
11. "On the Recent Improvements in the Electric Telegraph"—by Mr. W. S. Ward, *Honorary Secretary*—(Read March 17th, 1848.)
12. "On Light: its Properties and Nature, and Application to the Formation and Phenomena of the Rainbow"—by the Rev. Dr. Holmes, *Vice-President*—(Read April 7th, 1848.)
13. "On Reason and Instinct, and their Connexion with the Nervous System"—by Dr. Simpson, of Pontefract—(Read April 28th, 1848.)

During the Session the following Lectures were delivered. The first Course, consisting of Four Lectures by Dr. CARPENTER, F.R.S., "On the Revelations of the Microscope," was illustrated by a series of most exquisite preparations from the animal and vegetable kingdoms, exhibited by the aid of the oxy-hydrogen microscope, which, from the beauty and wonderful structures thus displayed, astonished and delighted the audience; realizing most truly the assertion, that while "the telescope enables us to see a system in every star, the microscope unfolds to us a world in every atom."

The second Course, consisting of Three Lectures, was delivered by the Rev. Dr. WOLFF, "On the Lives of Tamerlane, Ali, and the Grand Llama of Thibet," in

which a vast store of traditionary information respecting these celebrated characters, gathered during Dr. Wolff's wanderings in the East, was embodied.

A third Course was announced to have been delivered by Mr. W. S. WARD, but as some researches connected with the subject of these Lectures caused the delivery to be postponed, in the first instance, until the month of March, it was found more advisable, on Mr. Ward's suggestion, to reserve the subject for the early part of the next Session.

The Council had last year the gratification to record a novel feature in the proceedings of the Society, in the holding of the first *Conversazione*, the success of which having greatly exceeded their most sanguine expectations, they felt encouraged to issue invitations for a second *Conversazione*, which fully equalled, if not exceeded, that of the previous year.

In reviewing the proceedings of the Session, the Council would not omit to notice the Dinner, which took place at the suggestion of the President, at which about fifty Members, Honorary Members, and gentlemen residing at a distance, assembled. The Dinner was held in the large room of the Museum, which was cleared for the occasion. Amongst those who were present at the Dinner were some who formerly took an active part in the proceedings of this Society, and who still continue to feel a warm interest in its welfare. The meeting was one of great intellectual enjoyment, and

the Council would suggest to their successors the advantage of continuing these interesting reunions.

With respect to the finances of the Society, the Council are unable to announce any improvement. The depressed state of trade has had an unfavourable influence, both as regards the addition of new Members and Subscribers, and in retarding the collection of subscriptions. This cause, it is earnestly hoped, will be of temporary duration, and that an increase of its supporters will enable the Society to extend its operations and usefulness. They would observe, however, that in accordance with the suggestion of their predecessors, economy has been practised in every department, as far as it was thought advisable for the well-being of the Society. The purchase of books has been entirely confined to those periodicals and transactions of which the Society are in possession of a long and valuable series, and whose future value would be materially deteriorated by their discontinuance.

Although the low state of the Society's funds has not justified the application of any part of them to the purchase of specimens for the Museum, the collection has, nevertheless, received many important additions, for which the Society is indebted to the liberality of several of its Members, who, at their own cost, have enriched its valuable stores to an extent, perhaps, never equalled in any former Session. Among the donations now alluded to, there are some which demand particular

notice. The first of these, in order of date, is a truly magnificent head and horns of the Gigantic Deer or Irish Elk (*Megaceros Hibernicus*), presented by George Goodman, Esq., during his Mayoralty. The additions of Enaliosaurian remains are very important, and will render this section of the Geological department of great interest, not only to the student but to the general observer. These include a fine specimen of *Ichthyosaurus Intermedius*, 7 feet 6 inches in length, presented by the late Joseph Taylor, Esq. A finely-developed example of *Ichthyosaurus Tenuirostris*, 7 feet in length; and two slabs of Lias, containing various portions of *Plesiosaurus Macrocephalus*, &c., presented by James Brown, Esq. A splendid head of *Ichthyosaurus Tenuirostris*, presented by George Noble, Esq.; and an equally fine head of *Ichthyosaurus Communis*, presented by C. G. Maclea, Esq.

To the munificence of William Gott, Esq., the Geological room is indebted for a noble and entire skeleton of the Gigantic Deer or Irish Elk, nearly 10 feet in height, which, as illustrating the majestic ruminants that, at former periods, were indigenous in these islands, and as being perhaps one of the last of those which became extinct, will prove one of the most attractive objects in the Museum. Independently of the interest which is attached to this specimen in a Geological point of view, it also enhances the value of the series of Osteological preparations, from certain peculiarities in

its structure, and from its being presented completely articulated. The Council have been induced to direct that the skeleton of the Elephant, purchased several years since of Mr. Wombwell, should be also articulated. In addition to the above, the skeletons of two of our rare British birds, the Red-breasted Merganser and the Turtle Dove, presented during the Session by James Brown, Esq., will render the collection of comparative anatomy more complete and instructive. To J. G. Lowe, Esq., of Chippenham, the Society is again indebted for a valuable series of 270 Fossils from the Laminated Oxford Clay of Christian Malford, Kelloway's Rock, and Kimmeridge Clay of Wiltshire; also to William Cunnington, Esq., of Devizes, for two fine specimens of *Ammonites Elizabethæ*, and one of *Belemnites Owenii*.

Amongst the miscellaneous additions to the Museum, the Council would direct attention to the very beautiful Model of Jerusalem and its Environs, upon a comparatively large scale, presented by several Members of the Society.

While reporting upon the progress which the Museum has made through the individual liberality of some of its Members, the Council cannot but regret that the finances of the Society will not allow of a certain amount being specially reserved as a Museum fund, for the securing of specimens under circumstances which occasionally occur, when the purchase

of the same will not admit of delay. From the want of such a provision during the past Session, the Council have to regret the loss of perhaps one of the most perfect specimens of *Ichthyosaurus* ever exhumed, and which has, in consequence, gone to enrich a foreign museum. The Council are fully sensible that the present times are not favourable to the carrying out of the above suggestion; they, nevertheless, venture to record their opinion on this point, in the hope that a more favourable period may arrive when so desirable a result shall be realised.

The Library continues to receive the Reports of various provincial institutions, as well as the Proceedings and Transactions of some of the leading scientific bodies in America. The principal additions during the Session consist of a splendid bound copy of Luther's Bible, presented by Mr. Brian; and the Magnetical and Meteorological Observations at St. Helena, presented by the British Government. It would afford the Council great satisfaction to see the Library of the Society considerably augmented by the addition of numerous works of standard scientific merit, the productions both of our own and foreign authors, from a conviction that a more extensive Library would conduce materially not only to the general usefulness, but also to the attractions, of the Society, and be the means of increasing the number of its supporters.

It is a source of much gratification to the Council to find that the Museum continues to be a daily object of interest to the inhabitants of this important district, as well as to strangers, several thousand persons having been admitted gratuitously during the past year.

LEEDS PHILOSOPHICAL AND LITERARY SOCIETY.

PROPRIETARY ACCOUNT.

Dr.	£.	s.	d.
Balance due to Treasurer	309	2	2

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To Balance due to Treasurer	100	17	11	
Sub-Curator's Salary and Expenses	120	0	0	
Insurance	8	8	4	
Tradesmen's Bills	13	0	1	
Books and Stationery	5	7	9	
Printing and Advertising	22	18	0	
Taxes	1	15	9	
Gas	12	19	4	
Coal and Coke	13	0	0	
Carriage and Preparation of Specimens	20	11	11	
Sundry Expenses, Cleaning, Postage, &c.	15	13	0	
Dr. Carpenter, for Four Lectures	21	10	0	
Dr. Wolff, for Three Lectures	15	0	0	
Janitor	26	0	0	
Expenses of Conversazione	19	16	1	
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	£425	17	2	

DONATIONS AND ADDITIONS

TO THE

SOCIETY'S MUSEUM.

Those marked thus (*) are *Honorary Members*; thus (†) *Members of this Society*.

GEOLOGY AND MINERALOGY.

- | | | |
|---|---|---|
| Two Molar Teeth of the Elephant,
from the Gravel, and Ammonites
Heterophyllus; Belemnites Sulcatus,
from the Oxford Clay, near Sleaford,
Lincolnshire | } | Mr. John Green, Leeds. |
| Specimen of Flexible Dolomite, from
Craven | } | Mrs. Hey. |
| Several Fossils, from the Magnesian
Limestone of Garforth | } | Mr. John Grayston. |
| Specimens of Pterichthys and Dipterus,
from the Old Red Sandstone of
Caithness | } | † T. P. Teale, Esq., F.L.S.,
(Curator.) |
| A very fine Head and Horns of the
Giant Deer or Irish Elk, (<i>Megaceros</i>
<i>Hibernicus</i>) | } | † George Goodman, Esq.,
Mayor of Leeds. |
| Very fine Specimen of Ichthyosaurus
Intermedius, 7 feet 6 inches in length,
from the Lias of Somersetshire | } | † Joseph Taylor, Esq.,
Blenheim-Terrace. |
| Two Jaws, Cervical and Dorsal Verte-
bræ, and Fore Leg of the Giant Deer,
(<i>Megaceros Hibernicus</i>) from Lim-
erick | } | Robert Arthington, Jun.,
Esq. |
| Fine Specimens of Belemnites Owenii
and Ammonites Elizabethæ, from
Christian Malford; and Rib of an
Ichthyosaurus, from the Lias of
Somersetshire | } | Wm. Cunnington, Esq.,
Devizes. |
| 270 valuable Specimens of Fossils, from
the Bradford Clay, Oxford Clay,
Cornbrash, Kelloway's Rock, and
Chalk of Wiltshire | } | J. G. Lowe, Esq., Chip-
penham. |

- Fine Specimen of Paramondra, from the Chalk at Thorpe, near Norwich } E. H. St. Quintin, Esq., Secretary of the Norwich Museum.
- A magnificent entire Skeleton of the Giant Deer or Irish Elk, (*Megaceros Hibernicus*,) completely articulated, from Lough Gur, near Limerick .. } † William Gott, Esq.
- Fine Specimen of Ichthyosaurus Tenuirostris, upwards of 7 feet in length, from Glastonbury; Two Slabs of Lias, containing the Humerus, Cervical Vertebrae, Ribs, Scapula, and portion of the Sternum, of Plesiosaurus Macrocephalus } † James Brown, Esq., Rossington.
- Very perfect Skull of the Female Giant Deer of Ireland, Base of Shed Horn of Do., Section of Skull of Do.; Three Skulls of the long-nosed Pig, One of the short-horned Ox, showing the fractured Frontal Bone; Skull of the Horse, Fragment of the Horn of the Red Deer, and two portions of the Horns of the Rein Deer, from Lough Gur, near Limerick } * Mr. H. Denny.
- Very interesting Specimen of Halonia, from Potternewton } Mr. Grayson, Leeds.
- Very beautiful Head of Ichthyosaurus Tenuirostris, from Glastonbury } † George Noble, Esq.
- Remarkably perfect Head of Ichthyosaurus Communis, from Glastonbury } † C. G. Maclea, Esq.
- Very fine Specimen of Moss Agate, from Burlington } † Miss Fearne.
- Several Fossils, from the Mountain Limestone of Ireland } Mr. Richard Glennon, Dublin.
- Eight Casts of Bones of the Iguanodon and Hylæosaurus, from Specimens in the British Museum } † James Brown, Esq., Rossington.
- Specimen of Dipterus Macrolepidotus, from Caithness } * Mr. H. Denny.
- Polished Slab of Mussel Bind, from the Morley Tunnel } Mr. Walsh.

ZOOLOGY, &c.

Several Insects and a small Tortoise, from Barbary	} † William Boyne, Esq.
Viper and Ringed Snake, in Spirits; Eggs of the Golden Eye, Eider Duck, Goosander, Red-breasted Merganser, Eared Grebe, Crested Grebe, Red Grouse, Stone Curlew, Hoopoe, Gol- den Oriole, Common Tern, Arctic Tern, Razor Bill, Kittiwake, Green Woodpecker, Starling, Pheasant, Red- legged Partridge, Jay, Magpie, Com- mon Partridge, Quail, Black Tern, Heron, Bewick's Swan, Kite, Kestrel, Sparrow Hawk, Bustard, Stock Dove, &c.....	} † Mr. Thomas Stansfeld.
Skeletons of the Swan and Peacock ...	{ The Leeds Zoological and Botanical Gardens.
Skeletons of the Red-breasted Mergan- ser and Turtle Dove	{ † James Brown, Esq., Rossington.
Specimen of the Lump Sucker	} Mr. Robinson.
Specimen of <i>Malva Verticillata</i> , from Llanelly, South Wales.....	{ Mr. James Motley, Llanelly.
Skeleton of the Skylark	} * Mr. H. Denny.

MISCELLANEOUS.

Cast of the Head of the Dodo, from the original Specimen in the Museum of the Ashmolean Society, Oxford ...	} † Wm. West, Esq., F.R.S.
Flag of the Chinese Admiral, taken by the <i>Nemesis</i> during the late Chinese War; and a Wooden Idol, taken from a Joss House	} † Charles Charnock, Esq., Stourton Lodge.
Beautiful coloured Model of Jerusalem, upon the scale of 18 inches to the mile	{ Presented by † Rev. Wm. Sinclair, † Rev. C. Wick- steed, † Dr. Heaton, † Josh. Lupton, Esq., † Arthur Lupton, Esq., † Arthur Marshall, Esq., † Miss Roberts, † George Shaw, Esq., † Miss Oates, and † John Atkinson, Esq.

LIBRARY.

- On the Origin of Coal: a Pamphlet ... } E. W. Binney, Esq.,
(the Author.)
- Description of the Fossil Skull of an }
Ox, discovered at Melksham, Wilts, } Mrs. Hey.
by Hy. Woods, A.L.S. London, 1839 }
- Transactions of the American Philo- }
sophical Society, vol. x., part 1; Pro- } The American Philosophical
ceedings of Ditto, from June to Dec. } Society, Philadelphia.
1847, (Nos. 36 to 39.)..... }
- Report of Proceedings of the Geological }
and Polytechnic Society of the West } The West Riding Geological
Riding of Yorkshire, at the 30th, 31st, } and Polytechnic Society.
and 32nd Meetings }
- On the Growth of the Salmon in Fresh } † T. P. Teale, Esq., F.L.S.,
Water. By William Yarrell } (Curator.)
- Report of the Council, List of Mem- }
bers, and Proceedings of the Zoolo- } The Zoological Society of
gical Society of London, for 1846 } London.
and 1847 }
- Magnetical and Meteorological Obser- } By Order of the British
vations at St. Helena, 1840 to 1843.. } Government.
- Splendid bound Copy of Luther's Bible, }
Fol., Luneburg, 1711 } † Mr. T. C. Brian.
- An Inaugural Lecture on Common Law, }
delivered in the Hall of the Inner } * The Author.
Temple, By Robert Hall, Esq., Bar- }
rister-at-Law }
- A Brief Examination of the Nebulous }
Hypothesis, &c. By John Wallis. } The Author.
Pamphlet: London, 1845 }
- Quarterly Journal of the Geological } The Geological Society of
Society of London, Nos. 11, 12, 13, 14. } London.

LIST OF OFFICERS, COUNCIL, & MEMBERS.

OFFICERS.

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Vice Presidents	{ Rev. Joseph Holmes, D.D.
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„ in Antiquities and Works of Art, &c....	{ Thomas Nunneley.
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Thomas Campbell, *London*.

William Carey, *London*.

Henry Denny, A.L.S., Corresponding Member of the Academy of Natural Sciences of Philadelphia, of the Syro-Egyptian Society of London; Honorary Member of the Philosophical Society of Dickinson College, Carlisle, Pennsylvania, of the Yorkshire Philosophical Society, and of the Norfolk and Norwich Museum, *Leeds*.

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TWENTY-NINTH REPORT

OF

THE COUNCIL

OF THE

LEEDS

PHILOSOPHICAL & LITERARY

SOCIETY,

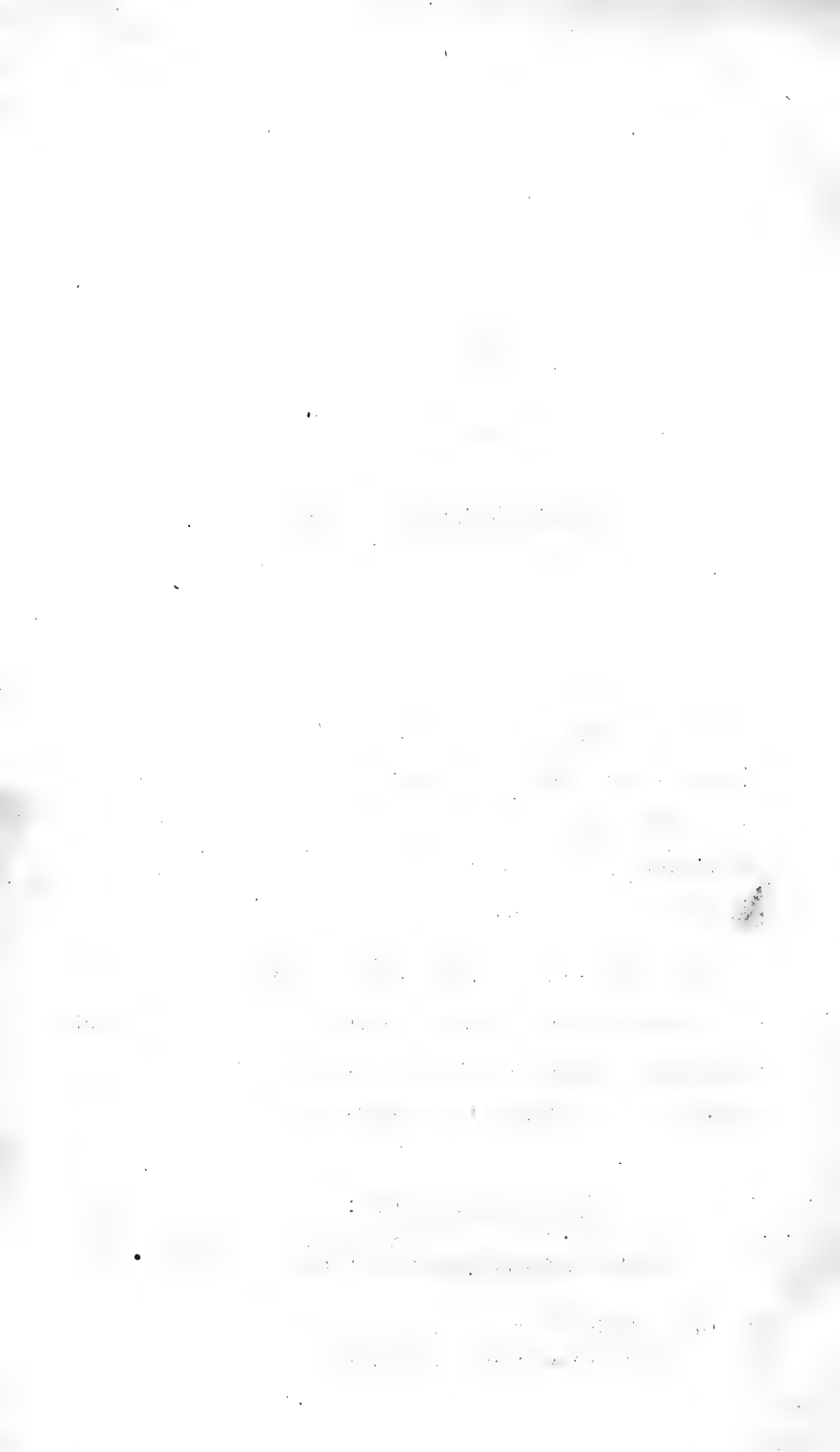
AT THE CLOSE OF THE SESSION,

1848-49.

LEEDS :

PRINTED BY C. KEMPLAY, INTELLIGENCER-OFFICE.

MDCCCXLIX.



REPORT OF THE COUNCIL,

AT THE CLOSE OF THE

TWENTY-NINTH SESSION.

IN presenting, at the close of the Twenty-ninth Session, to the Members and Subscribers of the Leeds Philosophical and Literary Society, the Annual Report, the Council have not to record any events requiring particular observation.

The Papers read at the Ordinary Meetings, during the Session, have, as usual, formed a prominent and interesting feature in its proceedings. The Titles of the Papers read before the Society are as follows:—

1. "On the Principles of Education—for Professional Men, for Females, and for the Working Classes."—By the Rev. Wm. Sinclair, *President*.—(Read October 20th, 1848.)
2. "On the Early History and Origin of Coal."—By Mr. H. Denny, A.L.S.—(Read November 3rd, 1848.)

3. The *Conversazione*—(November 17th, 1848.)
4. "On Numismatology, or the Study of Ancient Coins."—By Mr. William Boyne.—(Read December 1st, 1848.)
5. "On Madeira."—Communicated through the *President*.—(Read December 15th, 1848.)
6. "On the Character of Louis XI.—By Mr. James Hamilton Richardson.—(Read January 5th, 1849.)
7. "On Epidemics and Contagion."—By Mr. George Morley.—(Read January 19th, 1849.)
8. "On the Contrast between Ancient and Modern Civilization, and the probable tendencies of each."—By Wm. St. James Wheelhouse, Esq., Barrister-at-Law.—(Read February 2nd, 1849.)
9. "Physiology and Phrenology Contrasted."—By Mr. J. I. Ikin.—(Read February 16th, 1849.)
10. "On the Poetry of Gray and Collins."—By the Rev. C. F. Weidemann, M.A.—(Read March 2nd, 1849.)
11. "On the Natural Classification of Plants."—By Dr. Heaton.—(Read March 16th, 1849.)
12. "On the Discovery and History of the Empire of Brazil."—By Mr. Boyes.—(Read April 13th, 1849.)
13. "On the Principles of Design, by which the Moorish Architects were enabled to Invent Features of Architecture, and to Proportion all the Parts of their Buildings."—By Mr. Reid Corson.—(Read April 27th, 1849.)

The Lectures have been more numerous and brilliant than usual, consisting of not less than Six Courses, and it is gratifying to be able to add that Four of them were gratuitously contributed by Members of the

Society, a liberality which it is hoped will be followed in future Sessions.

The First Course delivered during the Session consisted of Four Lectures by Mr. C. COWDEN CLARKE, "On the Subordinate Characters in the Plays of Shakspeare." This Course was highly attractive, as was evinced by an increased attendance on each successive evening.

The Second Series consisted of Two Readings from Shakspeare, by Miss KELLY, for which the Society was mainly indebted to the public spirit of fifteen of its Members, who raised a guarantee fund, in addition to the small grant of five guineas from the funds of the Society, in order to secure the services of that distinguished lady. "The Merchant of Venice," and "Othello," were the two plays selected, and the taste, spirit, and discrimination of character, with which they were read gave much satisfaction to overflowing audiences.

These Readings were followed by a most interesting Course of Three Lectures "On Scottish Poetry, up to the close of the Eighteenth Century," by the Rev. WM. SINCLAIR, A.M., the *President*, which his intimate acquaintance with the habits and feelings of the poets and people of Scotland enabled him to give with great point and pathos. The Lectures were highly appreciated, and attracted crowded audiences. A great desire has been expressed that Mr. Sinclair may be induced to give

another Course during the next Session, extending the series into the Nineteenth Century, which the Council have reason to hope will be acceded to.

The Fourth Course, consisting of Four Lectures "On English Ballads, Songs, and Song Writers, to the close of the Eighteenth Century," was delivered by Mr. Martin Cawood. These Lectures, which were ably illustrated by efficient Vocalists, afforded much pleasure to a numerous audience.

The Fifth Course, of Four Lectures "On Electricity and Magnetism," by Mr. W. S. WARD, which was postponed from the last Session, was delivered in February and March last. The Experiments, which included the exhibition of the Electric Light and the effects of Dia-magnetism, were brilliant and successful, and the whole Course fully sustained the high reputation of the Lecturer.

The concluding Series, consisting of Four Lectures "On the Natural Classification of Plants," was delivered by Dr. HEATON, and evinced an accurate and minute acquaintance with the different structures, uses, and properties of many of the most important families of the Vegetable Kingdom. The Course was illustrated by numerous diagrams and specimens.

In accordance with the wish of many of the Members, another *Conversazione* was held in the Society's Rooms during the present Session. It was numerously attended, and proved quite as successful as

those held in previous years. In consequence of numerous applications for additional tickets, the Council on this occasion adopted the plan of issuing tickets at 5s. each, and from the funds thus realized the expenses of the *Conversazione* were materially reduced. The necessary Gas-fittings for lighting the Museum have been purchased during the present year, and consequently this source of expenditure, which has hitherto proved so serious, will, in future, be almost entirely obviated.

The Financial department does not present a very encouraging aspect. The proprietary debt still continues to press heavily upon the Society. The ordinary debt is increased since the last Report; but it must be explained that this circumstance is not so discouraging as at first sight may appear, as in two or three instances the disbursements include payments of heavy balances incurred during the last two or three years. In other respects, the financial condition of the Society may be considered as being more favourable than it was last year, from the fact, that while a larger amount has been received by the accession of new Members and Subscribers, of which seven of the former and thirteen of the latter have been elected, the outlay for Lectures has been inconsiderable, notwithstanding the increased number of Courses. It is, therefore, confidently hoped that, by a steady perseverance in economy, and an accession to the number of its supporters, the funds of

the Society may be gradually improved, and its importance and usefulness be more widely appreciated by the public.

The Council are not able to record, in their present Report, that the Contributions to the Museum have been so numerous, or of such importance, as those which distinguished the past year; nevertheless several interesting additions have been made. They do not, however, view this as any proof of a want of interest towards this department, but simply arising from causes which must always, more or less, affect such institutions. No objects of extraordinary value or attraction have been offered to the Society, which might have called forth the usual liberality of the Members when any appeal is made, except one specimen of *Plesiosaurus*, at Whitby, 23 feet in length, the largest known example, but which required for its purchase a sum far above what could be raised by a provincial institution. Amongst the additions to the Museum during the Session, the Council cannot, however, omit to mention the two Scapulæ of the Greenland Whale, and a Camel's Skull, presented by George Noble, Esq.; the Skeleton of the Black Bear, from the Leeds Zoological and Botanical Gardens, and the donation of Indian Fish, from Edw. Atkinson, Esq.

The accessions to the Library chiefly consist of the last edition of Dr. Pye Smith's *Scripture and Geology*, presented by the author, and a donation of standard Bo-

tanical Works, consisting of De Candolles, *Prodromus Systematis Naturalis, Regni Vegetabilis*, 7 vols. 8vo., Jussieu's *Genera Plantarum*, Don's *Catalogue of Plants*, and Lowden's *Encyclopædia of Plants*, from the Council of the Leeds Zoological and Botanical Gardens; and the Reports and Proceedings of several Metropolitan and Provincial Societies.

During the past year the Society has had the melancholy duty to record the loss of another of its early and most efficient Members, the Rev. R. W. Hamilton, D.D., LL.D., who joined the Society, in the First Session of its existence in 1821, and from that period until his decease, continued with unabated zeal to manifest a lively interest in its prosperity. He was ever ready to contribute to the literary proceedings of this Institution, for which his classical proficiency, extensive reading, and retentive memory, eminently qualified him. Dr. Hamilton, during the twenty-eight years of his membership, was (with only one or two exceptions, when the state of his health dictated the prudence of his retirement from public excitement) a Member of the Council, and filled with ability the offices of President and Vice President. During that period he delivered Twenty-two Papers and Lectures at the Meetings of this Society. The Members of Council who were not prevented by absence or inevitable engagements attended the funeral of Dr. Hamilton, and their sympathy was communicated by

the President to Mrs. Hamilton in the following resolution :—

“The Council of the Philosophical and Literary Society cannot suffer the recent melancholy event, which has deprived it of one of its brightest ornaments, and the town of one of its most valued citizens, to pass without recording their deep sense of the heavy loss they have sustained in the death of the late Rev. R. W. Hamilton, D.D. LL.D., and without conveying to the family of their departed friend the expression of their sympathy with them at so afflicting a bereavement. They beg to intimate to the family, that as many of the Members of the Council as can attend hope to mark their respect for the memory of the late Dr. Hamilton by joining the funeral procession at the Cemetery.

(Signed)

“WILLIAM SINCLAIR, A.M.,

PRESIDENT.”

The Council have pleasure in informing the Members that the Society has very recently become possessed, through the liberality of John Wilkinson, Esq., of Gledhow Mount, of a very characteristic Lithographic Likeness of the late Dr. Hamilton.

The Society have also to lament the loss of another of its earliest Members, in the decease of Edward Baines, Esq., who contributed to its first formation, by his able editorial assistance, and zealous co-operation with other gentlemen who were desirous of establishing a Philosophical Society in Leeds, at a period when no similar institution existed in this county. Although Mr. Baines never filled any office in the Society, he was always ready when his services or influence could be beneficial to its interests, to afford his assistance.

While thus reminded, by the removal of friends and supporters, of the mutability of every thing human, the Council cherish the hope that if some be taken away from their sphere of usefulness, others of like minds and similar talents will arise to take their places, and that thus the Society will continue to diffuse its beneficial, happy, and harmonious effects in Leeds and its neighbourhood.

LEEDS PHILOSOPHICAL AND LITERARY SOCIETY.

PROPRIETARY ACCOUNT.

Dr.

Balance due to Treasurer £316 18 2

ORDINARY ACCOUNT.

Disbursements.

	£. s. d.
To Balance due to Treasurer	168 1 8
Sub-Curator's Salary and Expenses	120 0 0
Insurance	8 8 4
Tradesmen's Bills—Plumber for Gas Fittings, &c.	92 13 7
" " Painters	35 19 0
" " Ironmonger	10 2 6
" " Joiner	6 11 1
Books and Stationery	6 1 0
Printing and Advertising	1 4 6
Taxes	2 5 9
Gas	11 7 2
Coals and Coke for 1847 and 1848	23 7 9
Carriage and Preparation of Specimens	4 2 2
Expenses of Conversation	16 1 6
Less sale of Extra Tickets	8 5 0

Mr. C. C. Clarke, for Four Lectures	7 16 6
Miss Kelly, for Two Readings	21 0 0
Less Guarantee Fund . £10 2 6	
" Received for Tickets, 5 13 0	£15 15 6

Expenses of Mr. Cawood's Lectures	5 4 6
Sundry Expenses, Cleaning, Postage, Delivering Notices, &c.	10 8 8
Janitor's Salary	16 13 9
Interest and Commission to Banker	26 0 0
	11 13 0
	£589 0 11

Receipts.

By Subscription of 73 Members	£. s. d.
" 38 Annual Subscribers	153 6 0
Entrance Fee of 4 New Members	39 18 0
Subscription of 7 New Members	12 12 0
" 13 New Subscribers	14 14 0
Arrears of Subscription	13 13 0
Mr. C. C. Clarke's Lectures	25 4 0
Rev. Wm. Sinclair's Lectures	2 7 6
Mr. Cawood's Lectures	2 3 0
Mr. Ward's Lectures	4 6 6
Dr. Heaton's Lectures	0 13 6
Rent of West-Riding Geological Society	0 10 6
Quarter of a Year's Rent of Cellars	20 0 0
Admissions to the Museum	3 15 0
	0 5 0

293 8 0

Balance due to the Treasurer

295 12 11

May 4th, 1849.

£589 0 11

DONATIONS AND ADDITIONS

TO THE

SOCIETY'S MUSEUM.

Those marked thus (*) are Honorary Members: thus (+) Members of this Society.

GEOLOGY AND MINERALOGY.

- | | | |
|--|---|--|
| Five Shark's Teeth, from the Suffolk
Cragg | } | Mr. E. Charlesworth, York. |
| | | |
| Specimen of <i>Asaphus Buckii</i> , from Llan-
deilo, S. W. | } | Wm. Samuel, Esq., Belle Vue
Terrace, Swansea. |
| | | |
| Specimen of De-arsenate of Lead . . . | } | Mr. Wm. Richardson. |
| Specimen of <i>Zamia gigas</i> , from Redcar . | } | +Mr. Sparke George. |

ZOOLOGY.

- | | | |
|--|---|---|
| Skeleton of the Green Woodpecker (<i>Picus</i>
<i>Viridis</i>) | } | +Mr. T. P. Teale, F.L.S. |
| | | |
| Very fine Specimen of the Indian Sucking
Fish (<i>Echeneis Naucrates</i>), Saw Fish
(<i>Pristis Antiquorum</i>), Parrot Fish (<i>Tetraodon Stellatus</i>), two Specimens of
Hippocampus, and Green Snake, from
the East Indies | } | Mr. E. Atkinson, Little Wood-
house. |
| | | |

- Skeleton of the Brown Bear (*Ursus*) } The Leeds Zoological and Botanical Gardens.
Arctos) }
- Specimen of the Corn Crake (*Crex Pra-*) } †John Burton, Esq., Roundhay.
tensis) }
- Skull of the Grampus (*Phocaena Orca*) . } *Mr. H. Denny.
- A very fine Pair of the Horns of the Rein }
 Deer (*Cervus Tarandus*) } †Peter Fairbairn, Esq.
- Immature Specimen of Richardson's Squa }
(Lestris Richardsoni) } †George Walker, Esq.
- Three Specimens of the Flying Fish, from } †Charles Charnock, Esq., Holm-
 Africa (*Exocoetus Exiliens*) } field House, Pontefract.
- Skeletons of the Common Seal (*Phoca*) } Mr. Wombwell.
Vitulina), and a Ring-tailed Monkey }
- Skull of the Camel (*Camelus Dromedarius*), }
 and two Scapulæ of the Greenland Whale } †George Noble, Esq.
(Balæna Mysticetus) }
- Pair of Nephrops Norvegicus } Purchased by the Society.

MISCELLANEOUS.

- Two Silver and two Copper Indian Coins } Mr. E. Atkinson, Little Wood-
 house.
- Cannon Ball, from Marston Moor; Hand }
 Grenade, found in the False Roof of an }
 old House on Cavalier Hill, Leeds; }
 ancient Italian Rifle-barreled Pistol; } Mr. John Dixon, Leeds.
 ancient Whittle, or Hunting Knife; }
 antique Lock and Key; Indian Bow }
 and Arrows }

Lithographic Portrait of the late Rev. Dr. } †John Wilkinson, Esq., Gleadow
Hamilton, Framed and Glazed . . . } Mount.

Pair of Shoes, from India, native manu- }
facture } Purchased by the Society.

LIBRARY.

Transactions of the American Philosophical }
Society, vol. 10, part 1, 4to.; Proceedings } The American Philosophical
of Ditto, parts 36, 37, 38, and 39. } Society, Philadelphia.

Reports of Proceedings of the Geological }
and Polytechnic Society of the West- } The Geological and Polytechnic
Riding of Yorkshire, at the 34th, 35th, } Society.
36th, and 37th Meetings }

Littell's Living Age, No. 201, Philadelphia, }
1848 } R. H. Dana, Esq., Editor.

On the Relation between the Holy Scrip- }
tures and some parts of Geological } The Author.
Science; by John Pye Smith, D.D., LL.D. }
Fourth Edition, 8vo. }

On the Origin of Coal; by E. W. Binney, }
F.G.S., a pamphlet, 8vo. } The Author.

On the Relative Properties of Iron, made by }
the use of Cold and Hot Blast; by } The Author.
Henry Hartop, Civil Engineer . . . }

Report of the Dublin University Museum, }
for December, 1848 } Robt. Ball, Esq., Director.

Proceedings of the Liverpool Philosophical }
Society; parts 1, 2, 3, and 4 . . . } The Liverpool Philosophical
Society.

Catalogue of the Newcastle Philosophical Society ; 1 vol. 8vo.	}	The Newcastle Philosophical Society.
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Donn's Hortus Cantabrigiensis, 1 vol. 8vo.	}	The Council of the Leeds Zoological and Botanical Gardens.
Lowden's, J. C., Encyclopædia of Plants, 1 vol. 8vo.		
Jussieu, A. L., Genera Plantarum, 1 vol. 8vo.		
Decandolle's, A. P., Prodrromus Systematis Naturalis, Regni Vegetabilis, 7 vols. 8vo.		

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Vice Presidents	{ Rev. Joseph Holmes, D.D. William West, F.R.S.
Treasurer	William Williams Brown.
Secretaries	{ William Sykes Ward. George Shaw.
Curator in Geology	J. G. Marshall, F. G. S.
„ in Zoology	T. P. Teale, F.L.S.
„ in Antiquities and Works of Art, &c. ...	Thomas Nunneley.
Sub-Curator	Henry Denny, A.L.S.

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John Burton.	William Gott.
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* Members deceased, whose Shares have not been transferred.

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Miss P. C. Oates.
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Thomas Campbell, *London*.

William Carey, *London*.

Henry Denny, A.L.S., Corresponding Member of the Academy of Natural Sciences of Philadelphia, of the Syro-Egyptian Society of London; Honorary Member of the Philosophical Society of Dickinson College, Carlisle, Pennsylvania, of the Yorkshire Philosophical Society, and of the Norfolk and Norwich Museum, *Leeds*.

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John Field, *Low Moor*.

The Rt. Hon. Earl Fitzwilliam, F.R.S. &c., *Wentworth House*.

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Robert E. Grant, M.D., F.R.S.L. and E., and F.L.S., G.S., Z.S., W.S., &c. &c., Professor of Comparative Anatomy and Zoology in the University of London, *London*.

Robert Hall, A.M., Barrister-at-Law, *London*.

Rev. W. V. Vernon Harcourt, F.R.S., F.G.S., Vice-President of the Yorkshire Philosophical Society, *Bolton-Percy*.

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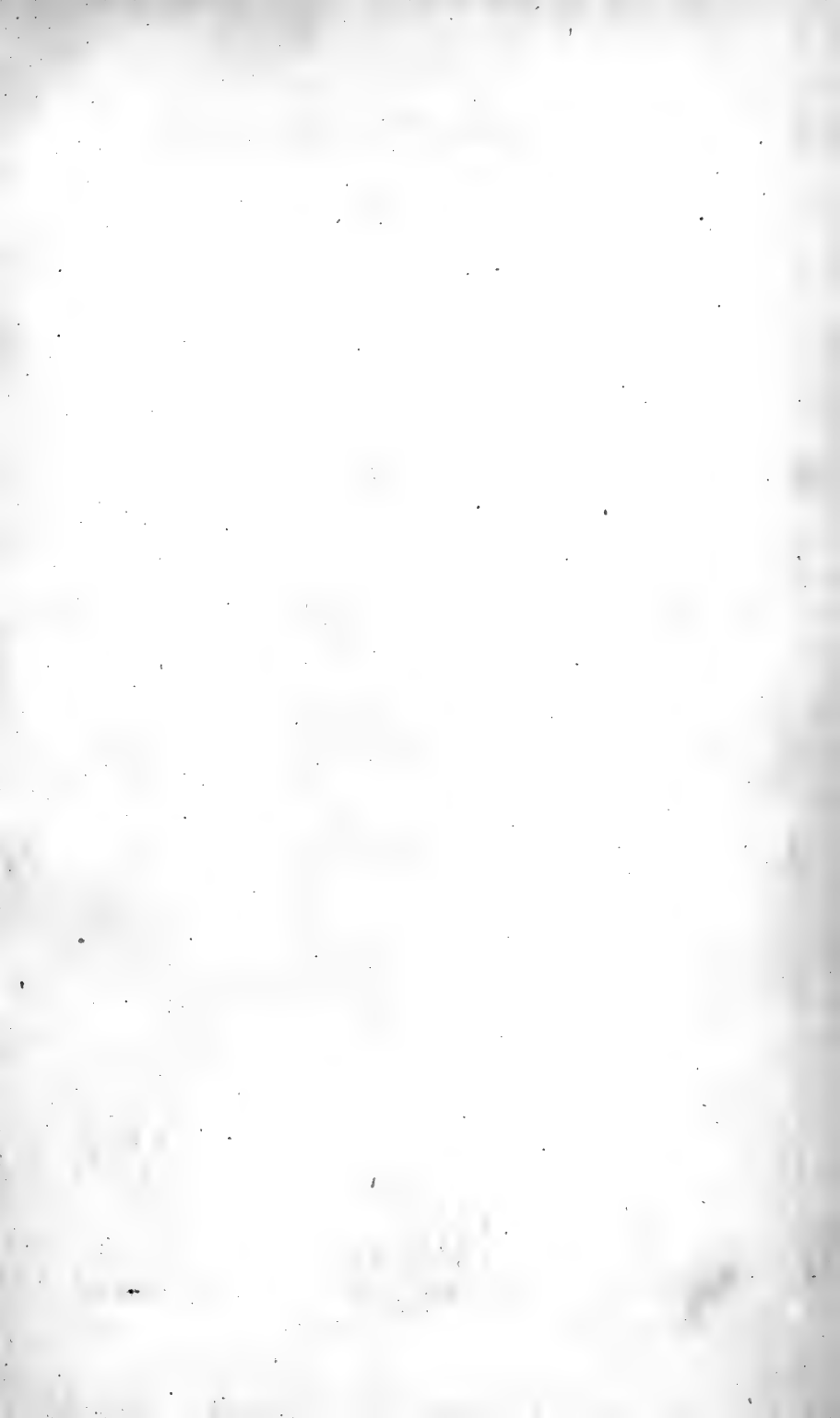
Rev. William Thorp, A.M., *Misson Vicarage*.

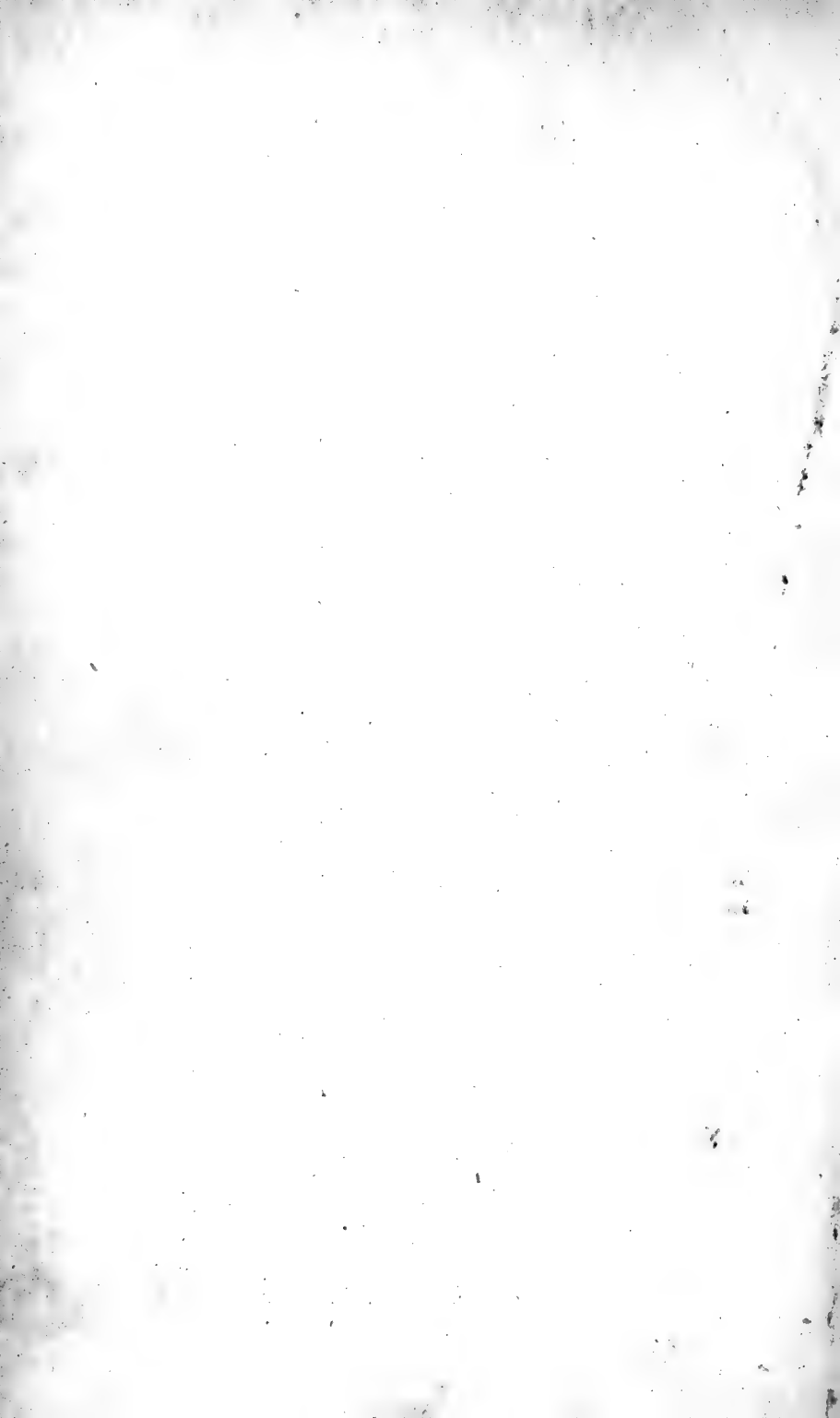
Thomas Stewart Trail, M.D., F.R.S. Professor of Medical Jurisprudence in the University of Edinburgh.

John K. Walker, M.D., *Huddersfield*.

Charles Waterton, Honorary Member of the Yorkshire Philosophical Society, and Bristol Institution, *Walton Hall*.







S. 146. A. 2.

THIRTIETH REPORT

OF

THE COUNCIL

OF THE

LEEDS

PHILOSOPHICAL AND LITERARY

SOCIETY,

AT THE CLOSE OF THE SESSION,

1849-50.

LEEDS:

PRINTED BY JOHN HEATON, BOOKSELLER, 7, BRIGGATE.

MDCCCL.





REPORT OF THE COUNCIL

AT THE CLOSE OF THE

THIRTIETH SESSION.

It again becomes the duty of the retiring Council to review the Transactions of the past Session, and to furnish a Report of their proceedings during their term of office. In adverting to the events of the Thirtieth Session, the Council are enabled to address the Members and Subscribers in the language of congratulation, on the improved state of the Finances of the Society. The Report of the Thirtieth Session will, in this respect, present a striking contrast to the desponding tone of those of previous Sessions, which year after year recorded the languishing state of the Funds of the Society.

In the Report of the Twenty-ninth Session, the retiring Council felt it incumbent on them to press particularly upon the attention of the Society the state of the Proprietary Debt, augmented by accumulations at Compound Interest, and the increasing amount of the Ordinary Debt. Soon after the election of the Council for the past Session, a Sub-Committee was appointed for the purpose of collecting opinions as to the practicability of making alterations in any of the Laws of the Society which appeared to

require amendment, and to devise means to improve the financial position of the Society. A variety of valuable suggestions were offered, of which several were brought before the Council in a short Report. The most prominent of these, urged the necessity of making a vigorous effort to pay off the Proprietary and Ordinary Debts. This portion of the Report was at once adopted by the Council, and it was determined to make a general Canvass of the friends of Literature and Science in the Town and Neighbourhood. The Canvass proved very successful, the sum of £820. 13s. having been raised; and the Council have the high gratification to announce that the Proprietary and Ordinary Debts have been extinguished, and that after the liquidation of all other claims, a handsome sum remains in the hands of the Treasurer. The success of the Canvass was materially assisted by the taking up of the four unappropriated Proprietary Shares of £100 each. Several years ago our late Member, W. ALDAM, jun., Esq., made the munificent offer to take one of the unsold Proprietary Shares, provided the remaining three were also taken up, and the remainder of the Debt entirely paid off. These conditions could not be complied with, until the present Canvass. Mr. ALDAM, nevertheless, did not consider his promise cancelled by the lapse of time, and an application having been made to our present Members, WILLIAM BECKETT and JAMES GARTH MARSHALL, Esquires, and to JAMES BROWN, Esq. of Harehills, the three remaining Shares were at once liberally taken.

In the appended list of Contributors to this Special Fund, will also be found the Names of many early and firm friends to this Institution, who, on numerous occasions, have generously contributed when called upon.

There are other suggestions in the Report referred to, which the Council would recommend to be taken into consideration by their successors.

The following Papers have been read at the Ordinary Meetings during the Session. They have generally been well attended, and have been followed by animated discussions :—

1. Address by the *President*. Paper "On the Monumental History of Egypt"—by Mr. W. Osburn, M.R.S. Lit.—(Read Oct. 26th, 1849.)
2. "On the Philosophy of the Choice of Building Stones"—by Mr. E. W. Brayley, of London—(Read Nov. 9th, 1849.)
3. "On the Relations of Science and Archæology with Religion"—by the Rev. Wm. Sinclair, A.M., *President*—(Read Nov. 23rd, 1849.)
4. The *Conversazione*.—(Dec. 7th, 1849.)
5. "On the Construction of Voltaic Batteries, as applicable for the Production of Electric Light"—by Mr. C. L. Dresser—(Read Dec. 21st, 1849.)
6. "On the Philosophy of Shall and Will"—by the Rev. Edward Higginson, of Wakefield—(Read Jan. 4th, 1850.)
7. "On some of the British and Mediæval Antiquities of Cornwall"—by Mr. Wm. Boyne, communicated by Mr. Spence, of Devenport—(Read Jan. 18th, 1850.)
8. "On the Marks of Civilization"—by the Rev. C. F. Weidemann, A.M., of Wakefield—(Read Feb. 1st, 1850.)
9. "On our Estimate of the Iliad in Youth and Maturity"—by the Rev. C. Wicksteed, B.A.—(Read Feb. 15th, 1850.)
10. "On the Second Stage of Mahommedanism"—by the Rev. Wm. Sinclair,

President, founded on a Communication from the Rev. Dr. Wolff—
(Read March 1st, 1850.)

11. "On Form"—by Mr. C. W. Burleigh—(Read March 15th, 1850.)
12. "On the Results of the Life and Teaching of Plato"—by the Rev. H. R. Reynolds—(Read April 5th, 1850.)
13. "On the Life, Genius, and Writings of Cervantes"—by Wm. St. James Wheelhouse, Esq., Barrister-at-Law—(Read April 19th, 1850.)

During the Session Three Courses of Lectures have been delivered. The first consisted of a Course of Four Lectures by E. W. BRAYLEY, Esq., F.L.S. and G.S., "On recent Investigations and Discoveries in several Departments of Science, relating to the Physical Structure of the World, and the Mutual Relations of Geology, Astronomy, and Meteorology." This Course was well attended, and the interesting matter brought before the audience on many novel and important subjects, proved highly attractive.

The second Series consisted of Four Readings from Shakspeare by Miss KELLY, whose talents as a dramatic reader were so highly appreciated last year as to induce the Council again to invite her to Leeds. The Plays selected were Hamlet, Twelfth Night, Macbeth, and As you like it. Miss KELLY read the Plays with her well known taste and discrimination of character, and the Readings were attended by overflowing audiences.

In the Report of last year a hope was expressed that the Rev. W. SINCLAIR, the *President*, might be induced to continue his interesting Course of Lectures "On Scottish Poetry," which terminated at the close of the Eighteenth, and to extend the Series into the Nineteenth Century.

The President kindly acceded to the wishes of the Council, and an additional Course of Three Lectures was delivered to crowded audiences, with the point and spirit which distinguished those of the previous year.

Another *Conversazione* was held in the Society's rooms early in December last; it was as successful and as well attended as those of any previous year. These agreeable reunions have given general satisfaction, and it is hoped will long continue to form an interesting feature in the Society's proceedings.

The Council have the gratification to record several valuable additions to the Museum,—one of the most important is a magnificent Specimen of *Plesiosaurus Macrocephalus*, nine feet in length, found in the Lias at Keinton in Somersetshire, presented by J. G. MARSHALL, Esq., M.P., the *Curator in Geology*, who, on being informed of the recent discovery of this valuable Specimen, directed that as soon as exhumed, it should be secured at his own cost for this Society. Mr. MARSHALL has also presented to the Society a fine Lower Jaw and Pelvic Bones, from another Specimen of the same species from the above locality. The expenses attending the transit of the above Specimen to Leeds, were also defrayed by Mr. MARSHALL. To the same class of organic remains another very valuable addition has been made of a Specimen of *Ichthyosaurus Communis*, six feet in length, presented by WM. WMS. BROWN, Esq., the *Treasurer*. A fine Specimen of Columnar Basalt, from the Giant's Causeway in Ireland, presented by

J. R. W. ATKINSON, Esq., of Elmwood-House, deserves special notice, not only on account of its unusual size as a Museum specimen, but as an interesting relic, the production of one of those mighty agents whose operations, at a former period of the world, have produced such stupendous results on the surface of our planet.

TO MISS FEARNE the Society is indebted for a valuable donation of Fossils from the London Clay, obtained from the British Natural History Society, to which that lady subscribed for the express purpose of presenting the Specimens to the Museum, and by means of which important contribution the Series of known Shells from this formation is now nearly complete.

The thanks of the Society are also due to the Committee of the Yorkshire Naturalist Club, for a very beautiful Specimen of *Asterias* in Sandstone from Pickering. From the labours of this Club, established solely for the collecting of and recording facts connected with the Natural History of the County, as well as for purchasing and presenting rare Specimens to the principal Museums in Yorkshire, much important aid may be expected, and the Council confidently hope that all those who take an interest in the furtherance of local Natural History will join its ranks.

By means of an exchange with Mr. MORGAN, of Llandillo, a valuable Series of Fossils illustrative of that portion of the Llandillo Flags at Dynevor Park, have been received, which have long been a desideratum in the Museum.

The principal addition in Zoology, is the Skeleton of an Alligator, six feet in length, presented by T. P. TEALE, Esq., F.L.S., the *Curator* of that department, which, from its size, will afford important aid in comparing the anatomical structure of the extinct and recent Saurians.

MESSRS. FENTEMAN have liberally presented an Egyptian Mummy and Coffin, and although the body is not in so good a state of preservation as to admit of its exhibition, the case illustrates the state of art in that country at a different period from either of those in the Museum, and is, consequently, possessed of much interest.

The additions to the Library that principally call for notice, are the highly important labours of our venerable Honorary Member, LUKE HOWARD, Esq., F.R.S., entitled *Barometrographia*, presented by the author. The completion of Agassiz's Monograph, on the Fishes of the Old Red Sandstone, presented by JAMES G. MARSHALL, Esq., M.P. The first part of the Proceedings of the Yorkshire Philosophical Society, presented by that Body; and the Proceedings of the Literary and Philosophical Society of Liverpool, presented by the Council of that Society.

During the Session a long wished for improvement in a portion of the Seats in the Lecture-Room has been effected, which the depressed state of the Funds prevented the Council undertaking at an earlier period.

During the past Session six Ordinary Members and twenty-five Subscribers have joined the Society, being one less of the former, and an increase of twelve of the latter,

over the number of the preceding year, three of the former having purchased the Tickets of retiring Members. The Council would hope that their successors may, at the close of the next Session, be able to record a still greater accession, thus evincing an increasing Public appreciation of the value and importance of this Institution, the oldest in Yorkshire, and the Parent of many other similar Societies.

SPECIAL FUND.

PROPRIETARY SHARES.

	£.	s.	d.		£.	s.	d.
William Aldam, <i>New Share</i> ...	100	0	0	James Brown, <i>New Share</i>	100	0	0
James Garth Marshall, <i>Ditto</i> ..	100	0	0	William Beckett, <i>Ditto</i>	100	0	0

DONATIONS.

	£.	s.	d.		£.	s.	d.
Messrs. Beckett & Co.	25	0	0	Dr. Heaton	5	0	0
J. G. Marshall	20	0	0	George Shaw	5	0	0
James Brown	20	0	0	William Beckett Denison	5	0	0
John Gott	20	0	0	W. T. Thompson	5	0	0
William Gott.....	20	0	0	John Rhodes	5	0	0
Wm. Wms. Brown	20	0	0	A Lady, per Rev. C. Wicksteed	5	0	0
Arthur Marshall	20	0	0	Joseph Bateson	5	0	0
H. C. Marshall	20	0	0	Dr. Chadwick	5	0	0
J. H. Shaw	10	0	0	T. T. Dibb.....	5	0	0
Wm. Boyne	10	0	0	John Heaton	5	0	0
John Blayds	10	0	0	Thomas Pease	5	0	0
George Noble.....	10	0	0	Edwin Eddison	5	0	0
T. W. Tottie.....	10	0	0	R. E. Payne	5	0	0
Miss Fearne	5	0	0	W. S. Dickinson	5	0	0
Rev. Wm. Sinclair	5	0	0	Edward Baines	5	0	0
W. S. Ward	5	0	0	Thomas Hall	5	0	0

LEEDS PHILOSOPHICAL AND LITERARY SOCIETY.

TREASURER'S ACCOUNT, MAY 3rd, 1850.

Receipts.

	£.	s.	d.
By Amount of Special Fund for liquidating the Proprietary and Ordinary Debt	820	13	0
Subscriptions of 75 Members	157	10	0
" 50 Subscribers	52	10	0
Entrance Fees of 3 New Members	9	9	0
Subscriptions of 6 New Members	12	12	0
" 24 New Subscribers	25	4	0
Arrears of Subscriptions	24	3	0
Cash received at Mr. Brayley's Lectures	1	6	0
" at Miss Kelly's Readings	9	11	0
" at the Rev. Wm. Sinclair's Lectures	1	9	6
Rent of West-Riding Geological Society	20	0	0
Admissions to the Museum	0	7	0

Disbursements.

	£.	s.	d.
To Treasurer's Debt paid off—Ordinary Debt... 308 0 10 Proprietary do. 324 16 2	632	17	0
Banker's Interest to Dec. 31st—Ordinary... 5 9 0 Proprietary 4 1 0			
Insurance	9	10	0
Tradesmen's Bills	8	8	4
Gas and Coke	59	19	6
Coals (half-a-year)	14	8	6
Printing and Advertising	5	4	6
Books and Stationery	39	0	0
Law Expenses for Preparing Trust Deed	18	12	6
Sub-Curator's Salary	25	7	0
Janitor	120	0	0
Purchase, and Carriage, and Preparation of Specimens	26	0	0
Taxes	9	6	11
Expenses of Conversation	2	5	4½
Less Receipts	13	3	9
	7	15	0
Sundry Expenses, Postage, Cleaning, &c.	5	8	9
Mr. Brayley for Four Lectures	14	8	10½
Miss Kelly for Four Readings	21	0	0
	31	10	0
Balance in Treasurer's hands	84	2	10
" in Sub-Curator's hands	7	4	5
	£1134	14	6

£1134 14 6

DONATIONS AND ADDITIONS

TO THE

SOCIETY'S MUSEUM.

Those marked thus () are Honorary Members; thus (+) Members of this Society.*

GEOLOGY AND MINERALOGY.

- | | |
|--|--|
| A valuable Series of the rarer Shells from the London Clay of Hordwell and Barton, from the British Natural History Society | } † Miss Fearne. |
| Specimen of Iron Pyrites from Bramhope Tunnel | } † Edwin Eddison, Esq. |
| Very Fine Specimen of Asterias in Sandstone, from Pickering | } The Committee of the Yorkshire Naturalists' Club. |
| Twenty-two Specimens of Fossils from the Great Oolite of Michenhampton | } Obtained by exchange. |
| Crystallized Silver Ore from Freyberg; Native Silver with Quartz from the Mines near Schneeberg; Quicksilver Ore from the Mines at Istria; Rose Cobalt from Schneeberg; Acicular Antimony, Siberia; Bismuth, Schneeberg; Kupper Nickel, Schneeberg | } Purchased by the Society. |
| A Valuable Series of Fossils from the Llandillo Flags of Dynevor Park, including Specimens of <i>Asaphus Buchii</i> , <i>Tyrannus</i> , &c. | } Obtained from Mr. Morgan, of Llandillo, by exchange. |
| Fine Specimen of Columnar Basalt, 5 feet 2 inches in height, from the Giant's Causeway, Ireland | } † J. R. W. Atkinson, Esq. Elmwood-House. |

- Very Fine Specimen of Plesiosaurus Macrocephalus, 9 feet in length, from Keinton in Somersetshire; Lower Jaw of another Specimen of the same Species, 2 feet 4 inches in length; and Three of the Pelvic Bones of ditto } + James Garth Marshall, Esq., M.P., F.G.S.
- A finely-developed and interesting Specimen of Ichthyosaurus Communis, 6 feet in length, from Keinton, Somersetshire... } + Wm. Williams Brown, Esq.

ZOOLOGY.

- Very Fine Specimen of the Barbel, caught near Wetherby } Frederick Oates, Esq. Spofforth.
- Specimen of the Burbot, and a fine Skeleton of the Alligator (*Crocodilus Lucius*), 6 feet in length } + T. P. Teale, F.L.S.
- Specimen of Ostracion Cornutus } John Clapham, Esq.
- Ten Birds' Skins, and Specimens of Sciurus tri-striatus, and Eatable Roussette, &c. from Ceylon } Mr. Wm. Dobbin.
- Specimens of Gymnolepas Cuvieri, and a fine Series of Gynolepas Vittata, from the Cornish Coast } Mr. C. W. Peach, Fowey, Cornwall.
- Specimen of the Cochin China Cock } + Wm. Gott, Esq.
- Very Fine Skull of the Hippopotamus, and Molar Tooth of the African Elephant ... } Purchased by the Society.

MISCELLANEOUS.

- Interesting Specimen of an Egyptian Mummy of an early date } Messrs. Fenteman.
- Fac-Simile of the Declaration of the Thirteen States of America in 1776..... } + Thomas Stansfeld, Esq.
- Portrait of William Hey, Esq. F. R. S. framed and glazed } + Dr. Heaton.

LIBRARY.

Proceedings of the American Philosophical Society, Vol. v. No. 41	} The American Philosophical Society.
Proceedings of the Yorkshire Philosophical Society, Vol. i. Part i.	} The Yorkshire Philosophical Society.
Kerslake's Catalogue of Books	} Mr. Kerslake, Bristol.
Catalogue of the Calcutta Public Library, 8vo. and Report of do. for 1847 and 1848	} The Proprietors of the Calcutta Public Library.
Barometrographia — the Variations of the Barometer in the Climate of Britain, by Luke Howard, Esq. F.R.S., Fol.....	} * The Author.
Proceedings of the Literary and Philosophical Society of Liverpool, Part v.	} The Literary and Philosophical Society of Liverpool.
Thirty-first Annual Report of the Royal Institution of Cornwall	} The Royal Institution of Cornwall.
Reports of the Natural History Society of Northumberland, Durham, and Newcastle-upon-Tyne, for 1848 and 1849	} The Natural History Society of Northumberland, Durham, and Newcastle-upon-Tyne.
Revision of the North American Tailed Batrachians, with Description of New Genera and Species, by Spencer F. Baird, M.D. of Pennsylvania ..	} * The Author.

LIST OF OFFICERS, COUNCIL, AND MEMBERS.

OFFICERS.

President	{ Rev. William Sinclair, A.M.
Vice-Presidents	{ Rev. Joseph Holmes, D.D.
	{ William West, F.R.S.
Treasurer	{ William Williams Brown.
Secretaries.....	{ William Sykes Ward.
	{ George Shaw.
Curator in Geology	{ J. G. Marshall, F.G.S.
„ in Zoology	{ T. P. Teale, F.L.S.
„ in Antiquities and Works of Art, &c.	{ Thomas Nunneley.
Sub-Curator	{ Henry Denny, A.L.S.

COUNCIL.

John Hope Shaw.	Joshua Ingham Ikin.
John A. Boyes.	Rev. Thomas Nunns.
J. D. Heaton, M.D.	William Blanshard.
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